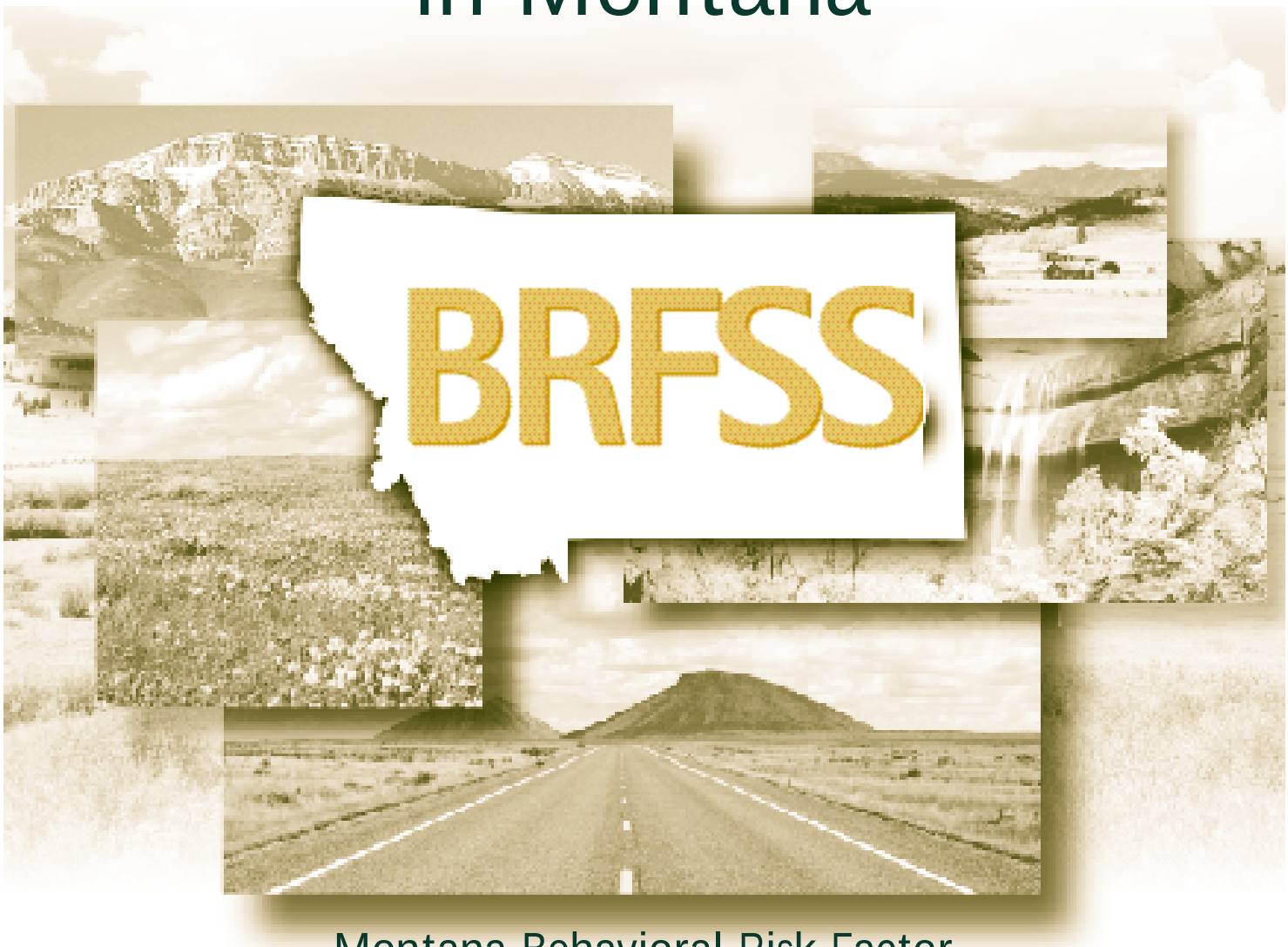
Assessing Health Risks in Montana



Montana Behavioral Risk Factor Surveillance System

1997 and 1998 Survey Results from the
Montana Behavioral Risk Factor Surveillance System

MONTANA
Department of Public Health & Human Services

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April 2000

This report was supported by Grant Number U58/CCU800588-17 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

DEPARTMENT OF
PUBLIC HEALTH AND HUMAN SERVICES

MARK RACICOT
GOVERNOR

LAURIE EKANGER
DIRECTOR

STATE OF MONTANA

From the Director:

The Montana Department of Public Health and Human Services is pleased to present this report of selected findings based on our 1997 and 1998 Montana Behavioral Risk Factor Surveillance System (BRFSS) survey results. This ninth report continues the delivery of risk factor information since 1984.

The BRFSS for 1997 and 1998 involved annual statewide telephone surveys of 1,800 adult residents per year, aged 18 and older. Montana is one of 50 states and several territories funded and supported by the Centers for Disease Control and Prevention to administer monthly telephone interviews to gather health-related data.

The project represents an ongoing surveillance of key risk factors to assess baseline data for identifying and targeting future health trends in Montana. The information serves as a valuable guide for planning health-promotion and disease-prevention activities and can assist health professionals in the public and private sectors in identifying populations at risk.

It is our hope that this report will serve as a resource for you and others, helping Montanans make concerted and informed efforts to face the health challenges of Montana's citizens.

Sincerely,

Laurie Ekanger
Director

ACKNOWLEDGMENTS

This report was prepared by the Chronic Disease Prevention and Health Promotion Section within the Montana Department of Public Health and Human Services (DPHHS). Telephone interviews were conducted by Northwest Resource Consultants of Helena, MT. The Centers for Disease Control and Prevention (CDC), Behavioral Surveillance Branch provided financial support and technical support for developing the questionnaires, implementing the survey, processing and weighting data. CDC's financial support has greatly facilitated DPHHS's ability to collect an important piece of the data needed to direct health-promotion programs. Also, the interviewing facilities acquired with CDC's financial support have been instrumental in enabling DPHHS to conduct additional point-in-time BRFSS surveys.

Special appreciation is extended to Northwest Resource Consultants' telephone interview team. Their dedication has consistently yielded high quality survey data for the Montana BRFSS.

Suggested Citation

Montana Department of Public Health and Human Services. 2000. Assessing health risks in Montana: 1997 and 1998 survey results from the Montana Behavioral Risk Factor Surveillance System. Chronic Disease Prevention and Health Promotion Section, Montana DPHHS, Helena, MT.

EXECUTIVE SUMMARY

The Montana Behavioral Risk Factor Surveillance System (BRFSS) has been collecting and reporting health-behavior data since 1984. The Montana Department of Public Health and Human Services (DPHHS) coordinates the telephone survey under a cooperative agreement with the Centers for Disease Control and Prevention (CDC).

The purpose of the survey is to gather information regarding personal practices, attitudes, and knowledge of adult Montanans that contribute to the leading causes of disease in the state. Monthly surveys averaged 150 completed telephone interviews per month, with totals of 1,803 and 1,804 completed surveys in 1997 and 1998, respectively.

This report summarizes the results of the 1997 and 1998 Montana BRFSS surveys.

Key Findings for 1997 and 1998

No Health Insurance:

Fifteen percent of Montanans reported that they had no health insurance (1997 and 1998 data, combined).

Overweight:

Approximately half (52%) of Montana adults were overweight according to the new standard for overweight established by the National Heart, Lung, and Blood Institute (1997 and 1998 data, combined). Thirty percent of Montanans were overweight according to the previous standard.

Fruit and Vegetable Consumption:

Nearly one-quarter (24%) of Montanans consumed the recommended five or more servings of fruits and vegetables per day (1997).

No Leisure-Time Physical Activity:

A quarter (25%) of Montanans participated in no leisure-time physical activity (1998).

High Blood Pressure:

Nearly a quarter (23%) of Montanans reported that they had been told at some time that they had high blood pressure (1997). Ninety-two percent of adults had their blood pressure checked within the past two years, as recommended.

High Cholesterol:

Sixty-nine percent of Montanans had ever had their blood cholesterol checked. Of those, 31% had ever been told that their blood cholesterol was high (1997).

Acute Drinking:

Fourteen percent of Montanans reported that they consumed five or more alcoholic drinks on one or more occasions in the past month (1997).

Chronic Drinking:

Three percent of Montanans reported that they consumed 60 or more alcoholic drinks in the past month (1997).

Seat Belt Use:

Nearly three-fifths (58%) of Montanans reported that they always used a seat belt when they drove or rode in a car (1997).

Drinking and Driving:

Three percent of Montanans reported that they had driven when they "had perhaps too much to drink" (1997).

Tobacco Use:

Approximately one-fifth (21%) of Montanans reported that they were current cigarette smokers and 6% used smokeless tobacco (1997 and 1998 data, combined).

Breast Cancer Screening:

Eighty percent of women aged 40 and older reported having ever had both a mammogram and clinical breast exam (1997 and 1998 data, combined).

Cervical Cancer Screening:

Eighty-two percent of Montana women (18 and older) reported that they had a Pap test within the past three years (1997 and 1998 data, combined).

Colorectal Cancer Screening:

Two-fifths (20%) of Montanans aged 50 and older had ever had a proctoscopic exam, while nearly one-quarter (24%) had a home blood stool test in the past two years (1997).

Diabetes:

Three percent of Montanans reported that they had diabetes (1997 and 1998 data, combined).

Immunization:

Seventy-one percent of Montanans aged 65 and older had a flu vaccination in the past year and 53% of Montanans aged 65 and older had ever had a pneumonia vaccination (1997 and 1998 data, combined).

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INTRODUCTION

Each year modifiable behaviors such as smoking, excessive alcohol consumption, and physical inactivity contribute to a substantial portion of the mortality and morbidity associated with chronic disease and unintentional injury (McKenna et al., 1998; Frazier et al., 1996). Underutilization of preventive-health services (e.g., blood pressure and cholesterol screening, cervical cancer screening) may also contribute to morbidity and premature death from many diseases. In 1998, 7,960 Montana residents died, predominantly from chronic diseases and unintentional injuries (Table 1).

Measuring the prevalence of high-risk behaviors and preventive-health services utilization provides information for targeting interventions aimed at reducing premature death and disease. From 1981 to 1983, the Centers for Disease Control and Prevention (CDC) funded 29 states to conduct point-in-time prevalence surveys of behaviors that were associated with an increased risk of developing avoidable illness and/or premature death (i.e., behavioral risk factors). In 1984, the CDC established the Behavioral Risk Factor Surveillance System (BRFSS), an annual telephone survey assessing health status and behavioral risk factors of the adult population (18 years and older) within 15 participat ing states. Through cooperative agreements between CDC and state departments of public health, the BRFSS has expanded to include all 50 states, the District of Columbia, and three U.S. territories.

Montana has participated in the BRFSS since 1984. The number of Montana adults sampled annually has increased from 855 in 1984 to 1,188 in 1985, and to 1,800 in 1996 through 1998. The number of questions included in the annual survey has increased from 45 questions in 1984 to 159 questions in 1998. Currently 150 interviews are com pleted each month. Subject areas include perceived health status, access to health care, health awareness, use of preventive services, as well as knowledge and attitudes of health care and health care practices.

The BRFSS survey provides valuable information on health trends, assessing chronic disease risk, and monitoring the effectiveness and public awareness of policies, programs and interventions. Additionally, these data are used to identify important health issues for future attention, formulate policies and legislation, and develop public awareness strategies.

The Healthy People 2000 (Public Health Service 1991, 1995) is a national initiative to improve the health of all Americans through prevention. "The initiative is driven by 319 specific national health-promotion and disease-prevention objectives targeted for achievement by the year 2000. Healthy People 2000's overall goals are to: 1) increase the span of healthy life, 2) reduce health disparities, and 3) achieve access to preventive services for all Americans."[1] Data from the annual BRFSS survey are the primary means of monitoring progress towards achieving national year 2000 health objectives (see Appendix A).

[1]See http://www.odphp.osophs.dhhs.gov/pubs/hp2000/

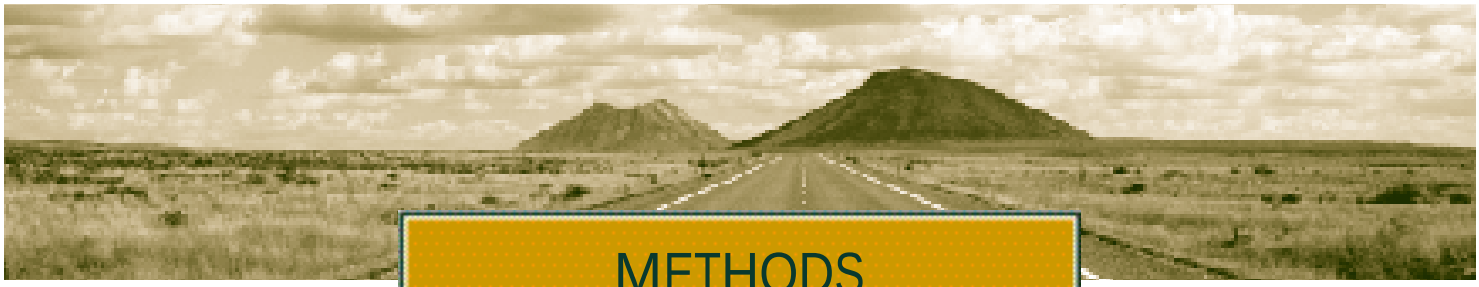
This report summarizes selected results from the 1997 and 1998 surveys. Results were tabulated for the overall Montana population, as well as for subpopulations (sex, age class, education level, income class, and two racial categories). When available, data from both years were combined to yield more reliable subpopulation estimates. The numbers reported in the data tables were the actual numbers of respondents, while the prevalence estimates (as percentages) were calculated using weighted data. Variation in risk behaviors and health characteristics among subpopulations were highlighted when appropriate. Graphs depicting point estimates over time were presented for selected point estimates. As a measure of data reliability, 95% confidence intervals (CI) were presented with the percentage prevalence estimates. Readers unfamiliar with interpreting point estimates and confidence intervals may wish to consult the discussion on confidence intervals found in the Methods section of this report.

Table 1. Behavioral risk factors associated with the leading causes of death in Montana, 1998+.

Rank	Cause of death	Number of deaths	Percentage of total deaths*	Associated Behavioral Risk Factors
1	Heart disease	2,001	25	Smoking, lack of physical activity, high blood pressure, high-fat diet, high blood cholesterol, overweight
2	Cancer	1,816	23	Smoking, high-fat diet, chronic drinking, environmental exposure
3	Cerebrovascular disease (including stroke)	576	7	High blood pressure, smoking, high blood cholesterol
4	Chronic obstructive pulmonary disease	505	6	Smoking, environmental exposure
5	Unintentional injury	463	6	Binge and chronic drinking, smoking, non-use of safety belts
6	Pneumonia and influenza	371	5	Smoking
7	Diabetes	196	2	Overweight
8	Suicide	156	2	Binge and chronic drinking
9	Alzheimer's disease	107	1	Unknown
10	Chronic liver disease and cirrhosis	90	1	Chronic drinking
	Total	6,281	79	

\+ Mortality data are from the Montana Department of Public Health and Human Services, Vital Statistics Bureau, 1999.

* Total deaths from all causes in 1998 was 7,960.



METHODS

Sampling Design

In 1997 and 1998, Montana used a Mitofsky-Waksberg three-stage cluster sampling technique for the BRFSS surveys. In this design, telephone numbers were randomly selected from blocks of 100 numbers, which were generated from the set of all existing prefixes in the state (Montana only has one area code). Sampling was then carried out in three stages. In the first stage, selected blocks of 100 randomly ordered numbers were screened to determine household status of the first phone number in each block. Blocks remained in the sample only if a residence was reached. In the second stage, the 100 numbers in the accepted block were dialed at random to identify additional households. In the third stage, individual respondents were randomly selected from all adults aged 18 and older living in a household. The selected adult was then interviewed in accordance with the BRFSS protocol (CDC 1998). In 1997 and 1998, a minimum of 150 interviews were completed per month for yearly totals of 1,803 and 1,804 interviews, respectively.

Montana interviews were conducted by Northwest Resource Consultants (Helena, MT) at facilities located at the Montana Department of Public Health and Human Services (DPHHS). Interviews were conducted during daytime and evening hours on Monday through Friday, and during daytime hours on weekends to ensure that selected individuals had ample opportunity to participate in the survey. Fifteen efforts were made to reach a phone number at different times of the day and evening and on different days before being classified as an unreachable number. The Council of American Survey Research Organizations (CASRO) response rate estimates for 1997 and 1998 were 72.6% and 72.1%, respectively. Five percent of completed interviews were verified by recontacting the respondent. Respondents selected for verification were contacted by an interviewer who did not conduct the original interview.

Data Weighting and Analysis

Data were weighted to account for differences in the probability of selection (e.g., households with more than one telephone number were more likely to be called). Post-stratification weighting based upon the population estimates for the respective survey year was used to ensure that the results more closely reflected the adult population of Montana.

A comparison of the demographic characteristics of the 1997 and 1998 survey sample with 1998 Census Bureau population estimates indicates that several population subgroups were either under- or over-represented in the samples (Table 2). Males and the 18- to 29-year age class may have been under represented, while females and the 65 and older age class may have been over-represented. Other subgroupings appear to have been sampled approximately according to their estimated occurrence in the population. The post-stratification weighting tends to correct for the apparent sampling error.

Respondents who indicated "don't know," "not sure," or "refused" were excluded from the calculation of prevalence estimates. SPSS® statistical package (SPSS, Inc. 1999) and the WesVar® Complex Samples™ module (Westat 1998) were used to compute prevalence estimates (expressed as percentages) and associated 95% confidence intervals using sample weights provided by CDC. Prevalence estimates based on denominators with fewer than 50 respondents were not reported due to the inherent low reliability. Analysis of subpopulations results in a concomitant lowering of sample size. The more subgroups into which the data are partitioned, the smaller the sample size per subgroup. To minimize this problem, when data were available for both 1997 and 1998, the data were combined for the analysis of subpopulations.

Data Reliability and 95% Confidence Intervals

As noted earlier, the BRFSS data represent a sample of the Montana adult population. It is not feasible to query the entire Montana population, so the sample is used to estimate population prevalences for health-risk behaviors.

The reliability of a sample statistic (e.g., prevalence) can be estimated by setting a confidence interval (sometimes referred to as the margin of error) around the statistic. By convention, 95% confidence intervals are generally used. As an example, a prevalence estimate for cigarette smoking is 21% with a computed 95% confidence interval of 2%, which translates to a lower limit of 19% and an upper limit of 23%. There is a 95% probability that the interval 19% to 23% includes the true percentage of smokers in the Montana population.

The width of a confidence interval (e.g., ± 2%) is dependent upon sample size. Estimates based on large samples have narrower confidence intervals and are more reliable than estimates based on small samples. Confidence intervals must be considered when making comparisons among subgroups of the population (e.g., among age classes). Percentages for different subgroups of the population can be determined to be significantly different if their confidence intervals do not overlap. A statistical test is needed to determine if estimates are likely to be different when the confidence intervals overlap.

Table 2. Distribution of the Montana 1997 and 1998 BRFSS survey sample and 1998 U.S. Census Bureau population estimates for the Montana adult population.

		BRFSS SAMPLE					
Demographic Group		1997	Percent* UW (W)	1998	Percent* UW (W)	1998 Census Bureau Estimate	Percent of Total Population
All Adults		1,803		1,804		656,050	
Sex	Males	760	42.1 (48.7)	787	43.6 (48.7)	322,106	49.1
	Females	1,043	57.8 (51.3)	1,017	56.4 (51.3)	333,944	50.9
Age	18-29	297	16.5 (20.2)	313	17.3 (20.1)	135,874	20.7
	30-34	578	32.1 (31.0)	548	30.4 (30.5)	189,941	29.0
	45-64	537	29.8 (29.3)	552	30.6 (30.0)	213,198	32.5
	65+	389	21.6 (19.4)	388	21.5 (19.4)	117,037	17.8
	Unknown	2		3			
Race	White, non-Hispanic	1,677	93.0 (92.7)	1,681	93.2 (92.9)	609,637	92.9
	Non-white or Hispanic	119	6.6 (6.9)	119	6.6 (6.9)	46,413	7.1
	Unknown	7		11			

* Unweighted (UW) and weighted (W) percentages.

Questionnaire

The questionnaire has three parts:

1)∞ the core, consisting of the fixed core questions (asked every year), rotating core questions (asked in alternating years), and emerging core questions (asked for only one year);

2)∞ optional modules provided by CDC, any number of which can be selected by individual states for inclusion; and

3) state-added questions (additional questions of specific interest to individual states).

All states must ask the core questions without modification in wording. As part of the core, respondents are asked to provide demographic information including sex, age, race, marital status, household income, employment status, and education level, in addition to questions on health-related behaviors. Optional modules and state-added questions are added by individual states to their respective questionnaires.

The Montana BRFSS Questionnaire consisted of 146 questions in 1997 and 159 in 1998. Not all respondents received all questions, since some questions pertain to specific age groups or sex, or persons with a particular condition (e.g., diabetes). The average length of time to administer the survey was 18 minutes in 1998.

Survey Limitations

Surveys that require self-reporting of data have limitations and should be interpreted with caution. Respondents may have the tendency to under-report behaviors that are socially undesirable, unhealthy, or illegal (e.g., drinking and driving or seat belt non-use) while over-reporting desirable behaviors (e.g., amount of exercise or regular health screening). The accuracy of self-reported information also is affected by the ability of respondents to fully recall past behaviors or health screening results.

Telephone surveys exclude households without telephones, which may result in a biased survey population due to under-representation of certain segments of the population. An estimated 96% of Montana households have at least one residential telephone. The four percent of homes without telephones may represent a population segment at high risk for preventable diseases associated with low socioeconomic status. The sampling procedures make no special effort to reach populations among which telephone lines per capita is lower than the norm.

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1997 and 1998 Survey Highlights

HEALTH STATUS

How would you say your general health is?

- Ten percent and 12% of Montana adults described their general health as “fair” or “poor” in 1997 and 1998, respectively.
- Since 1993, the percentage of adults reporting “fair” or “poor” health has remained constant.
- Significantly more older adults (45 and older) reported “fair” or “poor” health than did younger adults.
- Adults with less than a high school education had significantly higher percentages of “fair” or “poor” health compared to adults with higher levels of education.
- Adults with lower annual household income (<$20,000) more frequently reported “fair” or “poor” health compared to adults with higher income earnings.

How many days during the past month was your physical health not good?

- Thirty percent of Montana adults in 1997 and 1998 indicated that their physical health was not good on one or more days in the previous month.
- Significantly more females (34%) than males (26%) reported that their physical health was not good on one or more days in the previous month.
- Adults with less than a high school education were significantly more likely to report at least one day of poor physical health (41%) than adults with higher levels of education (27% to 31%).
- Percentages of those reporting one or more days of poor physical health increased with decreasing level of annual household income. Significantly fewer adults with annual household incomes greater than $50,000 (23%) reported poor physical health than adults with income less than $10,000 (39%).

How many days during the past month was your mental health not good?

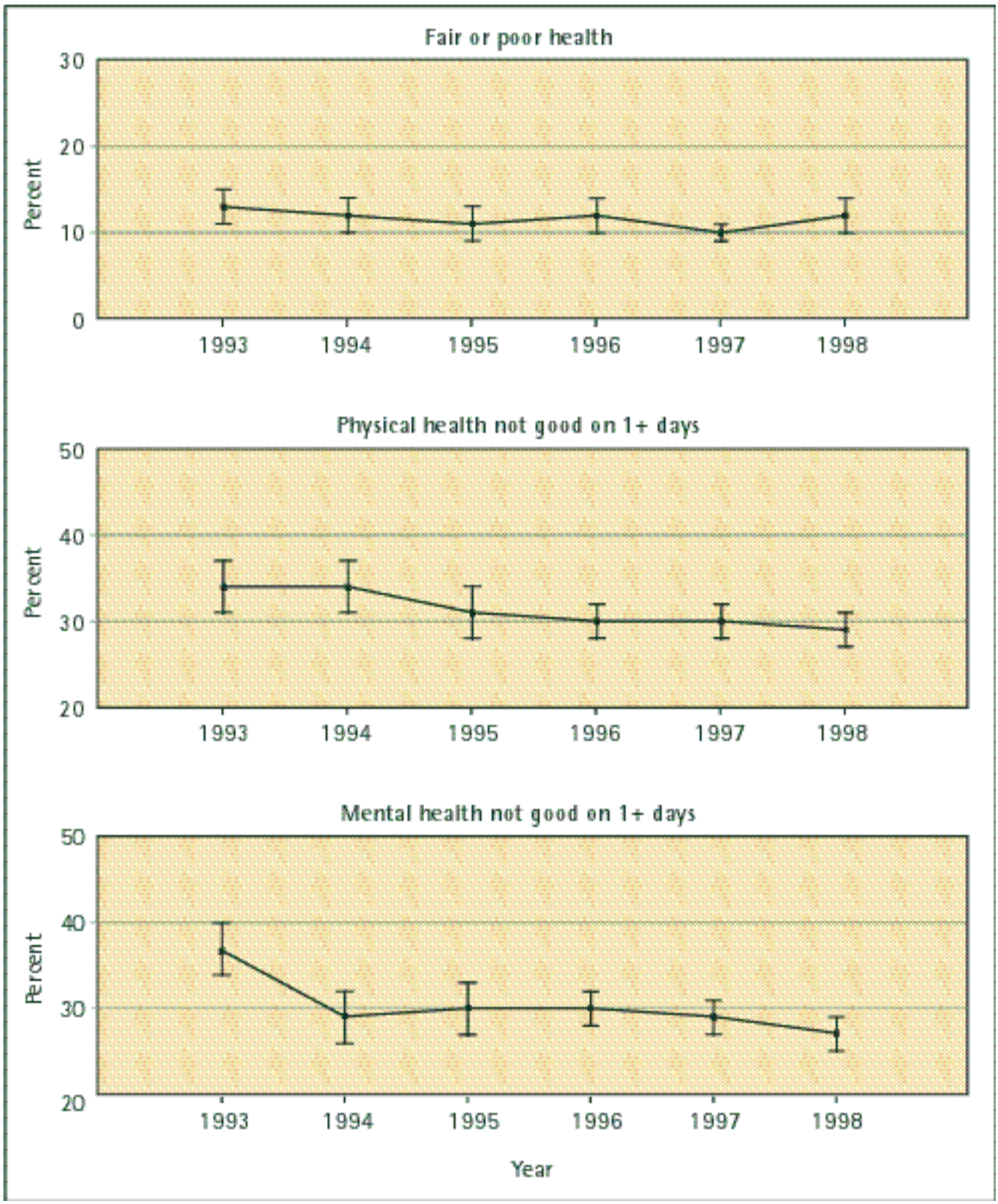
- Thirty percent of Montana adults in 1997 and 28% in 1998 reported that there were one or more days during the past month when their mental health was not good. This percentage has been relatively stable since 1994.
- Females reported one or more days of poor mental health significantly more frequently (35%) than did males (22%).
- The percentage of adults reporting one or more days of poor mental health declined with increasing age class. The percentage of adults 65 and older reporting poor mental health (13%) was significantly lower than younger age classes (27% to 39%).
- Significantly fewer adults with annual household incomes greater than $50,000 reported one or more days of poor mental health than adults in lower income brackets.

Table 3. Health Status of Montana Adults, 1997 and 1998 (with 95% confidence intervals).

	Fair or poor health				Physical health not good 1+ days in past month				Mental health not good 1+ days in past month			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults:												
1997	1798	203	10	(1)	1767	555	30	(2)	1757	534	30	(2)
1998	1800	226	12	(2)	1772	537	30	(2)	1757	496	28	(2)
Combined	3598	429	11	(1)	3539	1092	30	(2)	3514	1030	29	(2)
Sex:												
Male	1546	154	9	(2)	1528	404	26	(2)	1515	331	22	(2)
Female	2052	275	13	(2)	2011	688	34	(2)	1999	699	35	(2)
Age:												
18 - 29	610	23	4	(2)	607	200	33	(4)	604	243	39	(5)
30 - 44	1126	71	6	(1)	1111	349	30	(3)	1099	391	34	(3)
45 - 64	1086	154	14	(2)	1071	326	29	(3)	1059	297	27	(3)
65+	771	179	23	(3)	745	215	29	(4)	747	98	13	(2)
Education:												
<High School	359	97	24	(5)	339	137	41	(6)	340	91	28	(6)
High School	1172	162	13	(2)	1160	341	29	(3)	1149	303	27	(3)
Some College	1090	109	9	(2)	1070	338	31	(3)	1064	338	31	(3)
College Degree	972	59	6	(1)	965	27	27	(3)	956	297	29	(3)
Income:												
<$10,000	175	48	24	(7)	164	70	39	(8)	168	69	38	(8)
$10,000 - $19,999	563	101	17	(4)	555	193	32	(4)	549	200	35	(4)
$20,000 - $34,999	983	87	8	(2)	970	303	31	(3)	964	284	29	(3)
$35,000 - $49,999	561	27	5	(2)	557	160	29	(4)	555	175	31	(4)
$50,000+	504	19	4	(2)	500	118	23	(4)	498	121	23	(4)
Race:												
White, non-Hispanic	3349	387	11	(1)	3294	1006	30	(2)	3275	949	28	(2)
Non-white or Hispanic	238	40	16	(5)	234	84	35	(7)	229	76	35	(8)

When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 1. Self-Reported Health Status of Montana Adults by Type, 1993-1998.



HEALTH CARE ACCESS

Do you have any kind of health care coverage?

- Fifteen percent and 17% of Montana adults reported they were uninsured in 1997 and 1998, respectively.
- The percentage of uninsured adults has remained relatively constant since 1991.
- Significant differences in uninsured status were associated with age class, education, and household income level. The percentage of uninsured adults decreased with increasing age, with only 1% of adults 65 and older being uninsured (due to Medicare coverage). Significantly fewer adults with a college degree were uninsured compared to adults at lower education levels. The percentage uninsured decreased significantly with increasing income, with only 5% of adults with annual household incomes of $50,000 or more being uninsured.

How long has it been since you visited a doctor for a routine checkup?

- In 1997 and 1998, 65% and 64% of Montana adults reported they had had a routine checkup in the past 12 months, respectively. The percent of adults reporting they had a checkup in the past year has been relatively stable since 1990.
- Significantly more females (73%) had a checkup in the past year than did males (55%).
- Significantly more adults aged 65 and older (80%) had a checkup in the past year than did adults in younger age classes.

How long since you last visited a dentist?

- In 1997, 67% of Montana adults reported that they had visited a dentist in the past 12 months.
- The percentage of adults who visited a dentist in the past year increased with increasing education and annual household income levels.

Did you need to see a doctor in the past year, but could not because of the cost?

- 13% of Montana adults reported in 1997 and 1998 that they could not afford a doctor in the past year.
- Significantly more females (16%) than males (10%) responded that they could not afford a doctor in the past year.
- Significantly higher percentages of adults under 65, adults with less than a college degree, adults with annual household incomes less than $20,000, and non-whites reported that they could not afford a doctor in the past year.

Healthy People 2000 Objective:

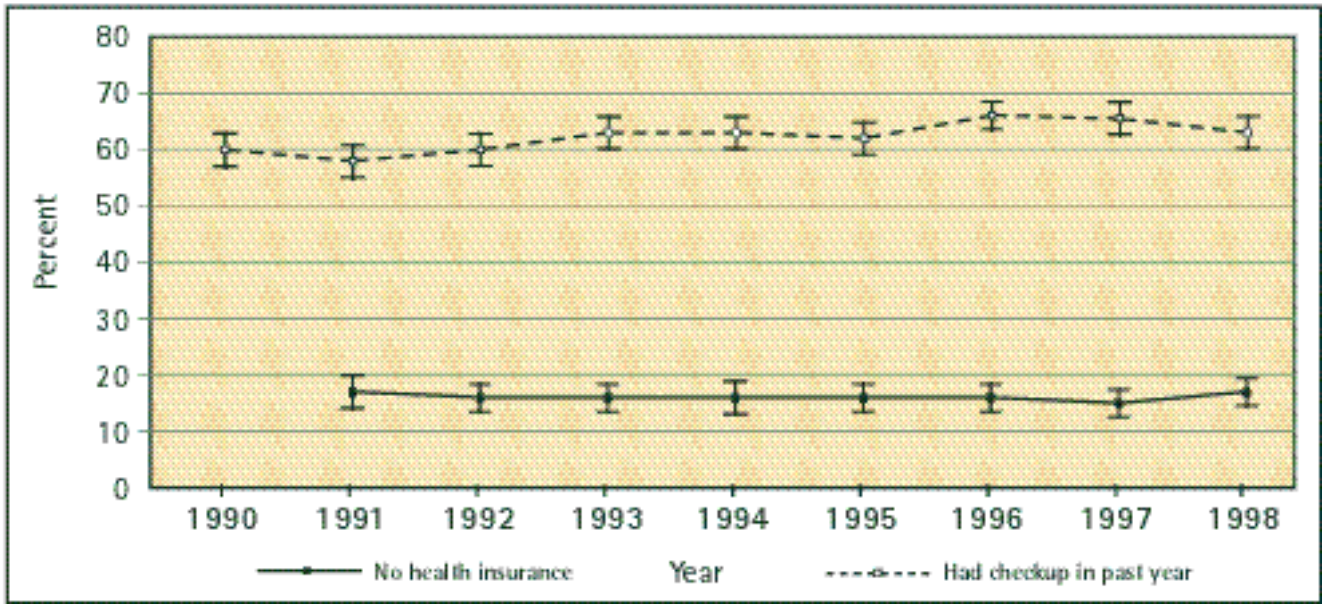
13.14 Increase to at least 70 percent the proportion of people aged 35 and older using the oral health care system each year.

Table 4. Health Care Access, Montana Adults, 1997 and 1998 (with 95% confidence intervals).

	No health insurance				Had routine checkup in past year				Visited dentist in past year				Couldn't afford doctor in past year			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults:																
1997	1800	271	15	(2)	1777	1167	65	(3)	1777	1202	67	(2)	1082	244	13	(2)
1998	1794	283	17	(2)	1781	1158	64	(3)					1803	241	13	(2)
Combined	3594	554	16	(1)	3558	2325	64	(2)					3605	485	13	(1)
Sex:																
Male	1538	251	17	(2)	1527	844	55	(3)	746	492	66	(4)	1546	155	10	(2)
Female	2056	303	15	(2)	2031	1481	73	(2)	1031	710	68	(3)	2059	330	16	(2)
Age:																
18 - 29	599	162	26	(4)	599	382	63	(4)	292	184	63	(7)	608	106	16	(3)
30 - 44	1124	217	20	(3)	1113	601	53	(3)	572	420	71	(4)	1126	192	16	(2)
45 - 64	1089	170	15	(2)	1077	723	66	(3)	535	372	69	(4)	1089	148	13	(2)
65+	777	5	1	(1)	765	617	80	(3)	376	225	61	(5)	771	39	5	(2)
Education:																
<High School	357	66	19	(5)	351	234	65	(6)	174	84	50	(8)	359	69	19	(5)
High School	1168	222	20	(2)	1164	751	63	(3)	569	369	64	(4)	1176	175	14	(2)
Some College	1091	179	17	(3)	1075	708	65	(3)	535	376	70	(4)	935	157	14	(2)
College Degree	973	87	9	(2)	963	629	64	(3)	495	371	74	(4)	973	84	8	(2)
Income:																
<$10,000	174	65	38	(8)	174	104	58	(8)	92	52	54	(11)	175	51	30	(8)
$10,000 - $19,999	562	160	31	(4)	555	333	59	(5)	271	151	53	(7)	563	146	26	(4)
$20,000 - $34,999	983	157	17	(3)	971	611	61	(3)	516	354	67	(4)	984	144	15	(2)
$35,000 - $49,999	561	47	9	(2)	557	357	63	(4)	298	226	74	(5)	561	49	10	(3)
$50,000+	505	28	5	(2)	500	338	66	(4)	237	189	79	(6)	505	19	3	(1)
Race:																
White, non-Hispanic	3346	506	16	(1)	3314	2162	64	(2)	1654	1126	68	(3)	3356	432	13	(1)
Non-white or Hispanic	237	45	19	(5)	234	160	69	(7)	116	73	60	(11)	238	51	21	(6)

When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 2. Health Care Access, Montana Adults, 1990-1998.



WEIGHT CONTROL AND NUTRITION

Overweight adults:

- In 1997 and 1998, 51% and 52% of adults, respectively, were at risk for being overweight according to the new Body Mass Index (BMI) classification of overweight (i.e., BMI ≥25). (According to the old classification for overweight used for Healthy People 2000 Objective 1.2 listed below, 28% (+/-2%) and 30% (+/-2%) of adults 20 and older were overweight in 1997 and 1998, respectively).
- From 1990 to 1998 there was a significant increase in the prevalence of overweight among Montana adults.
- Males (61%) were significantly more likely to be overweight than females (43%).
- Adults in the 45 to 64 age class were more likely to be overweight (61%) than any other age group, while significantly fewer 18 to 29 year olds (38%) were overweight.

Note: Body Mass Index (BMI) is used to indicate overweight. BMI is a ratio of weight to height [kg/m^2 or $(lbs. \times 700)/in.^2$)]. Previously, overweight was defined as a BMI ≥27.8 for males and ≥27.3 for females. This is the standard used by Healthy People 2000. The BMI standard for overweight was recently changed by the National Heart, Lung, and Blood Institute (1998) to a BMI ≥25 for both sexes.

Are you trying to lose weight?

- In 1998, 35% of adults were trying to lose weight.
- Females (45%) were significantly more likely than males (25%) to report that they were trying to lose weight.
- The percentage of people reporting they were trying to lose weight tended to increase with age until aged 65 and older.

Do you eat fruits and vegetables five or more times per day?

- In 1998, 24% of Montana adults reported eating at least five servings of fruits and vegetables a day. There was essentially no change in consumption from 1994 to 1998.
- Significantly more females (29%) than males (18%) said they were eating fruits and vegetables five or more times a day.
- Those adults aged 65 and older seemed to consume more fruits and vegetables than the younger age groups.
- College graduates were more likely to reach the recommended intake of fruits and vegetables than adults with less than a college degree.

Healthy People 2000 Objectives:

1.2 Reduce overweight to a prevalence of no more than 20 percent among people aged 20 and older.

16.8 Increase complex carbohydrate and fiber-containing foods in the diets of adults to five or more daily servings of vegetables (including legumes) and fruit and six or more daily servings for grain products.

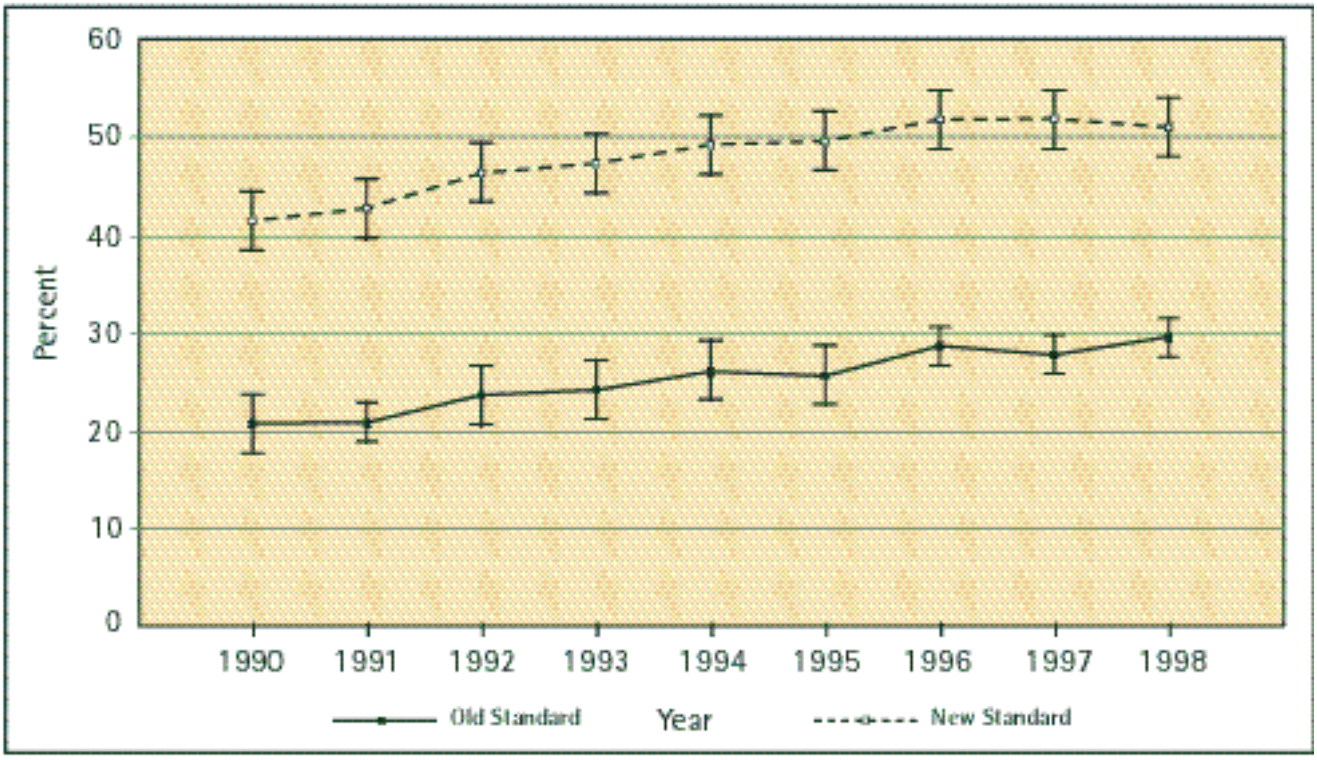
Table 5. Weight Control and Nutrition, Montana Adults, 1997 and 1998 (with 95% confidence intervals).

	Overweight*				Trying to lose weight				Eat fruits & vegetables 5+ times per day			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults:												
1997	1743	888	52	(3)								
1998	1729	875	51	(3)	1802	629	35	(2)	1794	434	24	(2)
Combined	3472	1763	52	(2)								
Sex:												
Male	1528	924	61	(3)	786	190	25	(3)	780	142	18	(3)
Female	1944	839	43	(2)	1016	439	45	(3)	1014	292	29	(3)
Age:												
18 - 29	598	220	38	(4)	313	95	29	(5)	312	84	26	(5)
30 - 44	1088	545	51	(3)	547	195	36	(4)	548	112	20	(4)
45 - 64	1032	616	61	(3)	552	236	42	(4)	548	122	21	(4)
65+	751	381	53	(4)	387	102	29	(5)	383	115	31	(5)
Education:												
<High School	345	180	55	(6)	179	51	29	(7)	176	32	19	(6)
High School	1133	599	54	(3)	600	210	35	(4)	597	103	16	(3)
Some College	1053	536	51	(3)	548	194	36	(4)	546	137	26	(4)
College Degree	938	446	49	(7)	474	174	37	(5)	474	162	35	(5)
Income:												
<$10,000	168	86	50	(8)	80	26	33	(12)	80	17	23	(12)
$10,000 - $19,999	550	275	51	(5)	291	97	32	(6)	289	57	19	(5)
$20,000 - $34,999	958	474	50	(3)	464	153	33	(5)	464	102	21	(4)
$35,000 - $49,999	548	292	54	(5)	263	111	43	(7)	263	69	26	(6)
$50,000+	493	270	56	(5)	267	108	39	(6)	267	68	26	(5)
Race:												
White, non-Hispanic	3235	1629	51	(2)	1679	586	35	(2)	1672	407	24	(2)
Non-white or Hispanic	228	127	59	(8)	119	41	36	(10)	118	26	18	(7)

* Overweight = BMI ≥25

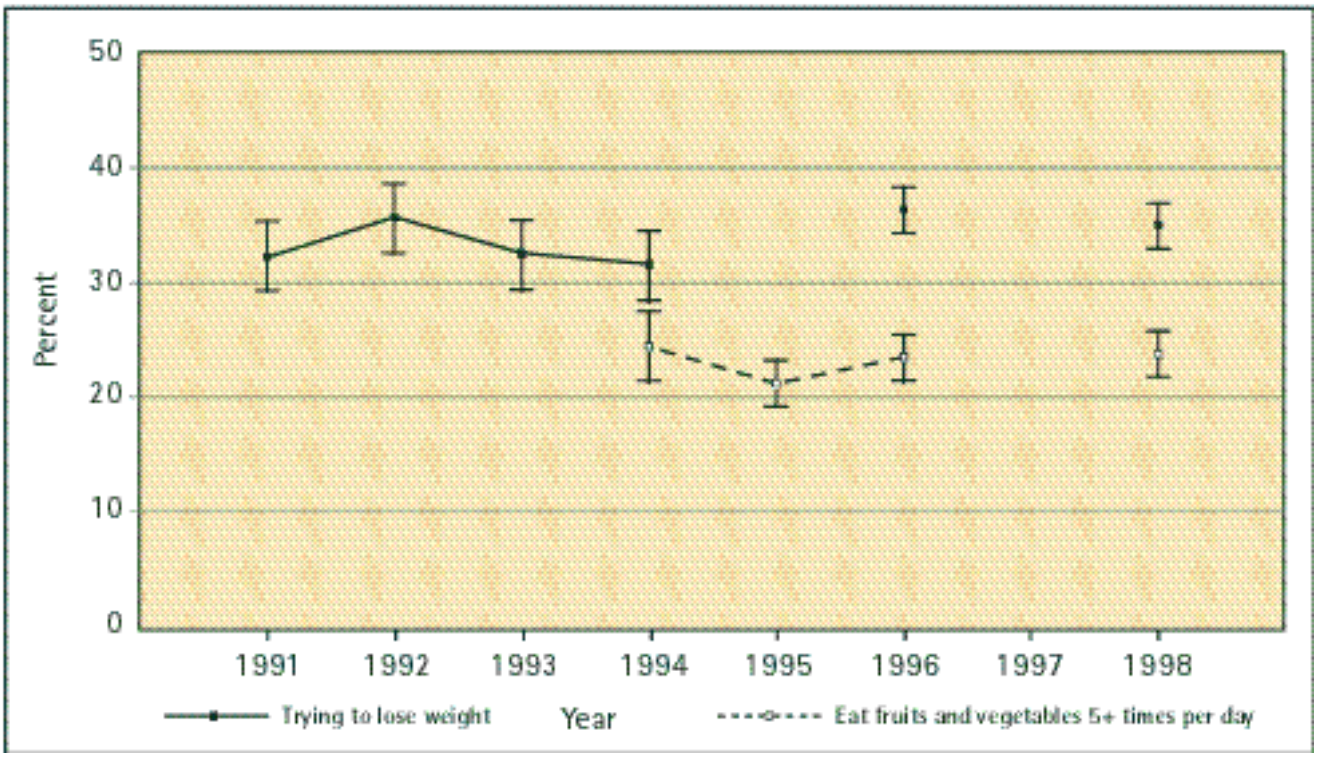
When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 3. Montana Adults Who Are Overweight According to Body Mass Index, 1990-1998.



Old overweight standard: male = BMI ≥ 27.8 and female = BMI ≥ 27.3
New overweight standard: male and female = BMI ≥ 25

Figure 4. Weight Loss and Fruit and Vegetable Consumption by Montana Adults, 1991-1998.



PHYSICAL ACTIVITY

No leisure-time physical activity

- In 1998, 25% of Montana adults reported engaging in no leisure-time physical activity.
- Adults aged 65 and older were most likely to be inactive, significantly more so than younger adults. Physical inactivity increased with age.
- Adults with less than a high school education were significantly more likely to be inactive (44%), while only 15% of college graduates were inactive. The percentage of physically inactive adults decreased with increasing education.
- Those adults with annual household income levels of $35,000 or more were less likely to be inactive.
- From 1990 to 1998, there was a significant increase in the percentages of adults who were physically inactive.

Note: Physical inactivity is defined as no leisure-time physical activity.

Light to moderate physical activity

- In 1998, 22% of Montana adults reported engaging in regular and sustained physical activity.
- Those adults aged 18 to 29 were significantly more likely than those in the 65 and older age class to report engaging in regular and sustained physical activity.
- Adults with a college education were significantly more likely to engage in light to moderate physical activity than adults with less than a high school education.

Note: Light to moderate physical activity is defined as five or more times a week, 30 minutes or more a session, regardless of intensity.

Vigorous physical activity

- Thirteen percent of adults in 1998 reported engaging in vigorous physical activity.
- Those with a college degree were significantly more likely to engage in vigorous physical activity than adults with less education.

Note: Vigorous physical activity is defined as three or more times a week, 20 or more minutes a session at 50% or more capacity.

Healthy People 2000 Objectives:

1.3 Increase to at least 30 percent the proportion of adults who engage regularly in light to moderate physical activity.

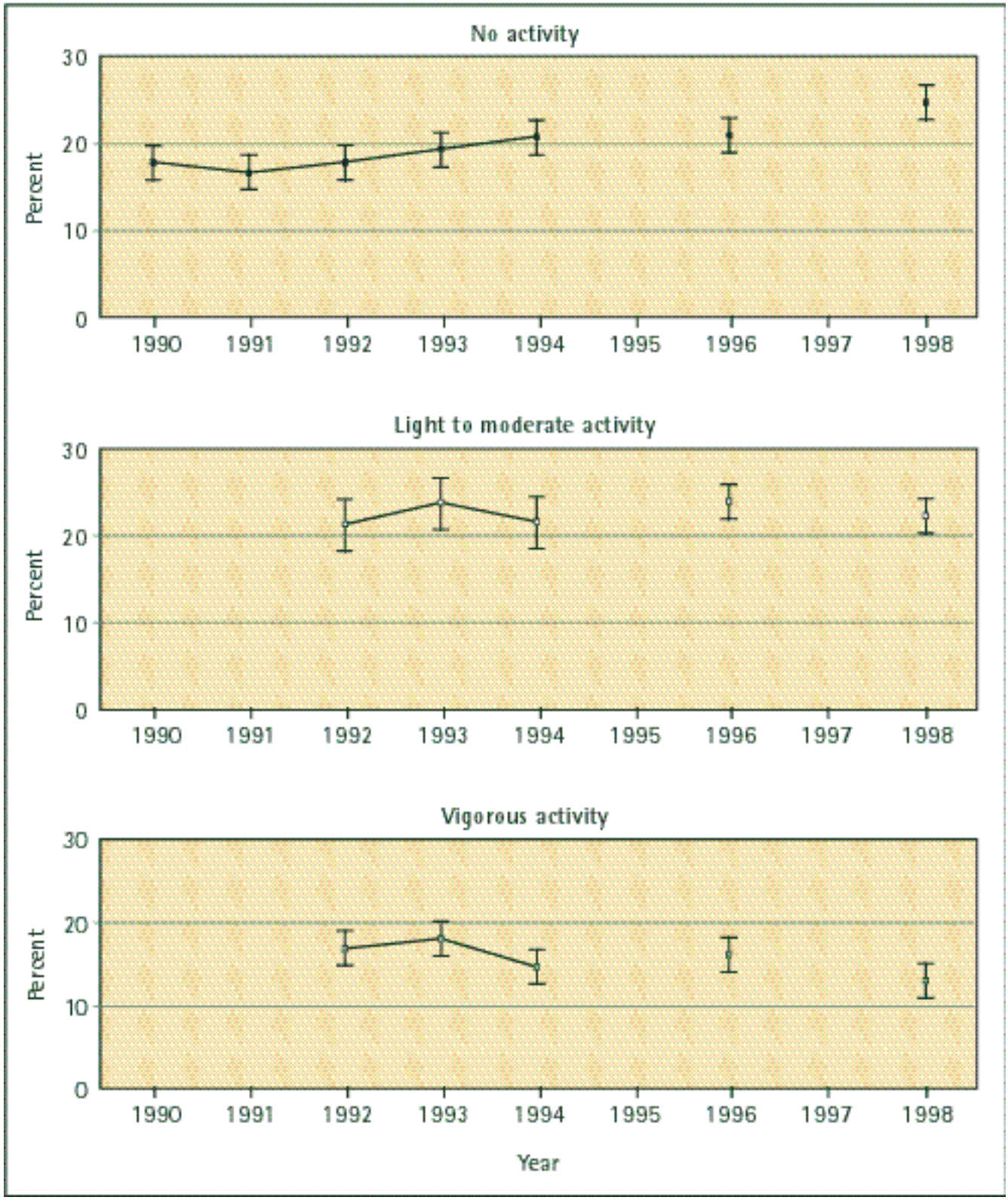
1.4 Increase to at least 20 percent the proportion of adults who engage in vigorous physical activity.

1.5 Reduce to no more than 15 percent the proportion of people. . . who engage in no leisure-time physical activity.

Table 6. Physical Activity, Montana Adults, 1998 (with 95% confidence intervals).

	No physical activity (Obj. 1.5)				Light to moderate physical activity (Obj. 1.3)				Vigorous physical activity (Obj. 1.4)			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults: 1998	1799	456	25	(2)	1799	395	22	(2)	1799	250	13	(2)
Sex:												
Male	784	185	23	(3)	784	168	22	(3)	784	106	13	(2)
Female	1015	271	27	(3)	1015	227	23	(3)	1015	144	14	(2)
Age:												
18 - 29	313	37	13	(4)	313	96	31	(6)	313	45	13	(4)
30 - 44	548	119	22	(4)	548	112	21	(4)	548	81	14	(3)
45 - 64	551	154	28	(4)	551	116	21	(4)	551	77	14	(3)
65+	384	145	38	(5)	384	71	19	(4)	384	47	12	(3)
Education:												
<High School	176	84	44	(8)	176	26	17	(7)	176	13	7	(4)
High School	601	173	29	(4)	601	116	20	(4)	601	61	10	(3)
Some College	547	125	23	(4)	547	114	21	(4)	547	75	13	(3)
College Degree	474	73	15	(3)	474	139	30	(5)	474	101	21	(4)
Income:												
<$10,000	80	26	35	(13)	80	19	24	(11)	80	15	15	(7)
$10,000 - $19,999	291	72	25	(5)	291	62	21	(5)	291	42	12	(4)
$20,000 - $34,999	464	127	28	(4)	464	89	19	(4)	464	47	10	(3)
$35,000 - $49,999	263	38	15	(5)	263	74	30	(6)	263	40	15	(4)
$50,000+	267	42	16	(5)	267	67	24	(6)	267	60	22	(5)
Race:												
White, non-Hispanic	1677	418	25	(2)	1677	372	23	(2)	1677	232	13	(2)
Non-white or Hispanic	118	36	32	(10)	118	23	18	(8)	118	18	13	(6)

Figure 5. Physical Activity of Montana Adults, 1990-1998.



HYPERTENSION AWARENESS

Were you ever told that your blood pressure was high?

- In 1997, 23% of Montana adults had been told at some time by a health care professional that their blood pressure was high.
- There was essentially no difference between sexes with respect to having been told they had high blood pressure.
- The percentage of adults who had ever been told they had high blood pressure increased with increasing age class. Significantly more adults aged 65 and older were told they had high blood pressure than adults in younger age classes.
- The percentage of adults reporting high blood pressure has remained approximately the same between 1991 and 1997.

Have you had your blood pressure checked in the past two years?

- Ninety-two percent of Montana adults in 1997 reported having had their blood pressure checked in the last two years.
- Women were significantly more likely than men to have had their blood pressure checked in the last two years.
- Age, education, income, and race had little or no influence on whether or not adults had their blood pressure checked in the past two years.
- Since 1990, there has been little or no change in the percentages of adults reporting that they had their blood pressure checked in the past two years.

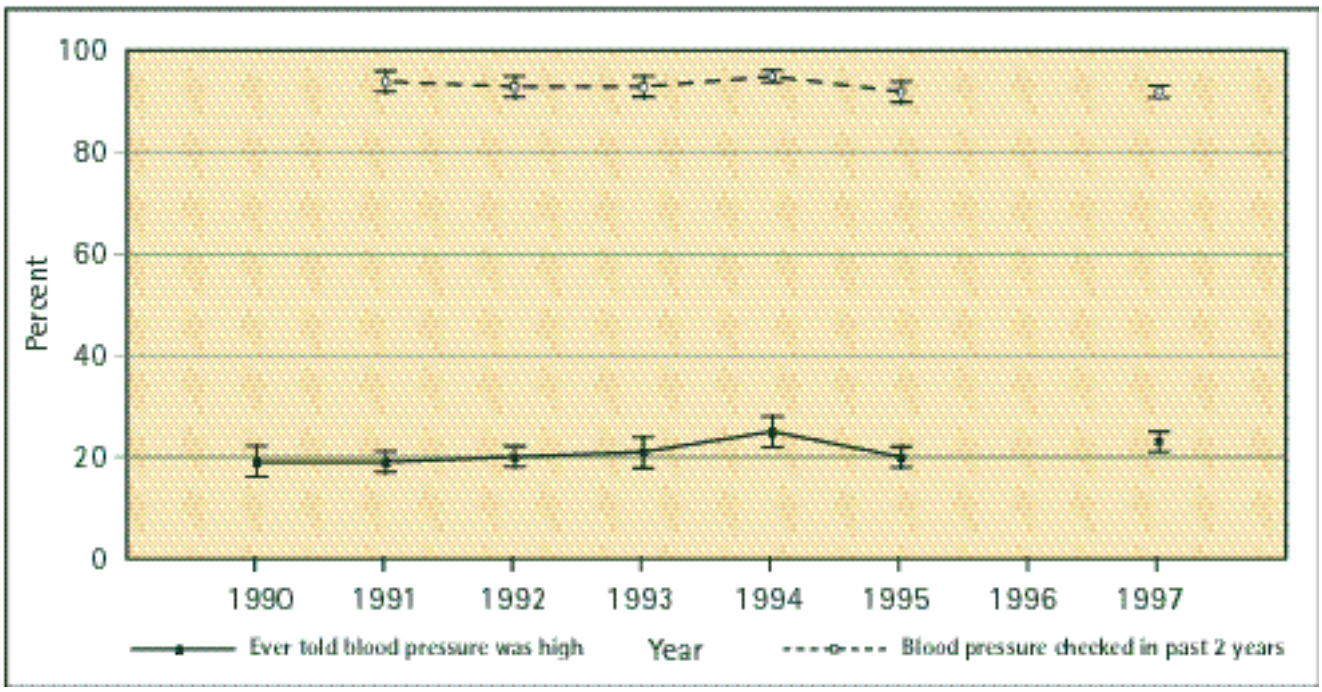
Healthy People 2000 Objective:

15.13 Increase to at least 90 percent the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high.

Table 7. Hypertension Awareness, Montana Adults, 1997 (with 95% confidence intervals).

	Ever told blood pressure was high				Blood pressure checked in last 2 years			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults : 1997	1798	444	23	(2)	1785	1654	92	(1)
Sex:								
Male	758	177	22	(3)	753	676	89	(2)
Female	1040	267	24	(3)	1032	978	95	(1)
Age:								
18 - 29	295	28	10	(4)	291	271	93	(3)
30 - 44	577	95	16	(3)	573	523	91	(3)
45 - 64	537	159	29	(4)	533	488	92	(2)
65+	387	161	38	(5)	386	370	94	(3)
Education:								
<High School	181	57	28	(7)	178	166	93	(4)
High School	572	156	26	(4)	568	523	92	(2)
Some College	542	125	20	(3)	539	507	94	(2)
College Degree	499	105	20	(4)	496	455	91	(3)
Income:								
<$10,000	95	30	28	(10)	92	82	88	(8)
$10,000 - $19,999	273	68	23	(5)	271	243	89	(4)
$20,000 - $34,999	519	133	25	(4)	514	478	92	(2)
$35,000 - $49,999	298	66	22	(5)	296	280	94	(3)
$50,000+	238	37	15	(5)	238	225	94	(3)
Race:								
White, non-Hispanic	1672	414	23	(2)	1662	138	92	(1)
Non-white or Hispanic	119	29	22	(8)	116	110	95	(4)

Figure 6. Hypertension Awareness, Montana Adults, 1990-1997.



CHOLESTEROL AWARENESS

Have you ever had your blood cholesterol checked?

- In 1997, 69% of Montana adults reported having ever had their blood cholesterol checked, with no difference between sexes.
- The percentage of adults having ever had their blood cholesterol checked increased significantly with increasing age class.
- Adults with a college education were significantly more likely to have had their cholesterol checked than adults with less education.
- The percentage of adults having ever had their blood cholesterol checked tended to increase with increasing household income. Adults with household incomes less than $20,000 were less likely to have had their cholesterol checked than adults with incomes of $50,000 or more.

Have you had your blood cholesterol checked in the past five years?

- In 1997, 63% of Montana adults had their blood cholesterol checked in the past five years, with no difference between sexes.
- With increasing age class, adults were more likely to report having had their blood cholesterol checked during the past five years.
- Significantly more adults with a college degree (70%) had their blood cholesterol checked within the past five years compared to adults with a high school education (60%) or less than a high school education (56%).
- The percentage of adults reporting that they had their cholesterol checked in the past five years has changed little since 1990.

Were you ever told your blood cholesterol was high?

- In 1997, 31% of adults had ever been told by a health care professional that their blood cholesterol was high.
- As age class increased, a greater percentage of adults reported being told their blood cholesterol level was high. Significantly more adults aged 45 and older had be told their blood cholesterol was high relative to adults less than 45 years of age.
- The percentage of adults who had ever been told that their blood cholesterol was high tended to increase with decreasing education level.
- Since 1990, the percentage of respondents reporting that they had ever been told that their blood cholesterol was high has remained relatively constant.

Healthy People 2000 Objective:

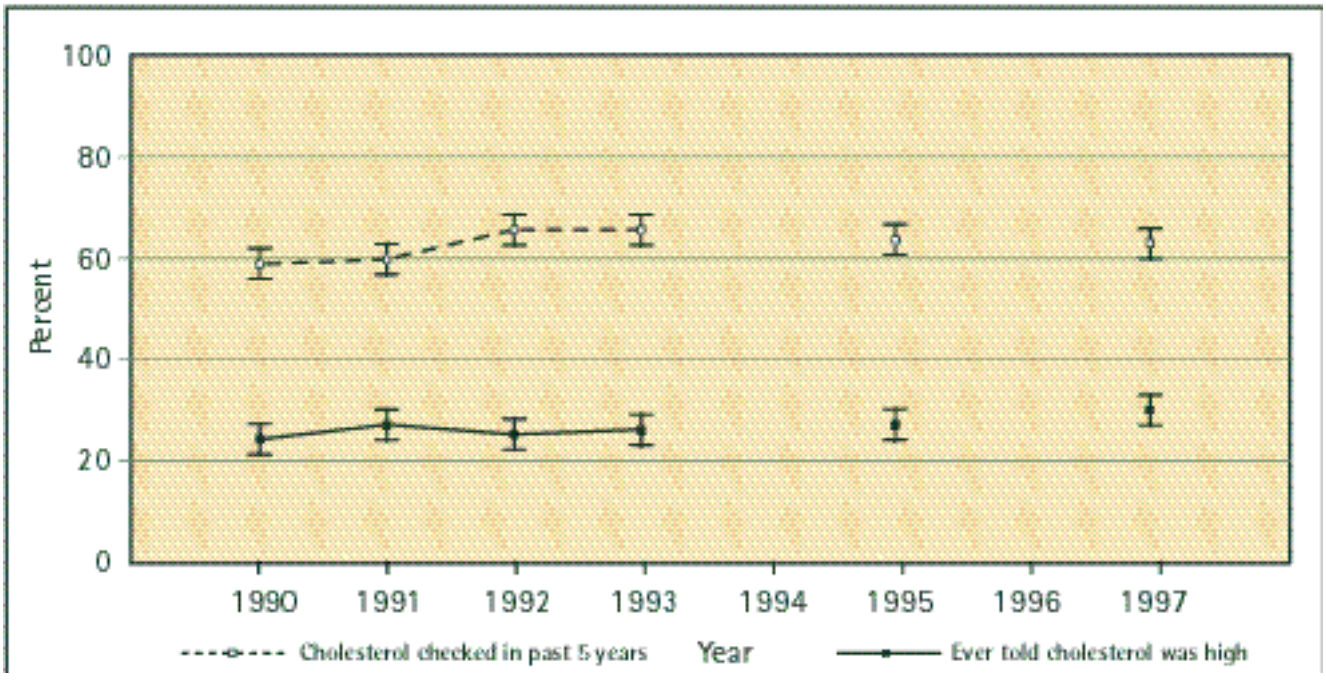
15.14 Increase to at least 75 percent the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.

Table 8. Cholesterol Awareness, Montana Adults, 1997 (with 95% confidence intervals).

	Ever had blood cholesterol checked				Blood cholesterol checked in past 5 years				Ever told blood cholesterol was high*		
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	No.	%	CI (+/-)
All Adults: 1997	1803	1282	69	(2)	1708	1107	63	(3)	396	31	(3)
Sex:											
Male	760	532	69	(4)	721	456	63	(4)	153	30	(4)
Female	1043	750	69	(3)	987	651	63	(3)	243	32	(4)
Age:											
18 - 29	297	118	39	(6)	274	105	38	(6)	16	14	(7)
30 - 44	578	377	64	(4)	552	303	54	(5)	86	23	(4)
45 - 64	537	460	86	(3)	512	400	79	(4)	161	36	(5)
65+	389	325	83	(4)	368	297	80	(4)	133	42	(6)
Education:											
<High School	181	115	59	(9)	166	101	56	(9)	50	44	(10)
High School	575	388	65	(4)	542	339	60	(4)	134	35	(5)
Some College	543	372	67	(4)	509	324	62	(5)	108	28	(5)
College Degree	500	404	81	(4)	488	341	70	(4)	104	26	(5)
Income:											
<$10,000	95	63	60	(12)	86	55	58	(13)	26	40	(14)
$10,000 - $19,999	273	162	57	(6)	255	137	52	(7)	53	32	(8)
$20,000 - $34,999	520	352	64	(4)	503	310	59	(9)	96	28	(5)
$35,000 - $49,999	298	233	79	(5)	289	198	69	(6)	75	34	(6)
$50,000+	238	201	83	(7)	231	172	73	(6)	50	25	(6)
Race:											
White, non-Hispanic	1677	1202	70	(2)	1593	1034	63	(3)	380	32	(3)
Non-white or Hispanic	119	76	61	(12)	109	70	62	(12)	15	20	(11)

* Denominator is people who ever had cholesterol checked

Figure 7. Cholesterol Awareness, Montana Adults, 1990-1997.



ALCOHOL CONSUMPTION

Binge drinking

- Fourteen percent of Montana adults in 1997 indicated that on one or more occasions in the past month they consumed five or more alcoholic beverages.
- The prevalence of self-reported binge drinking has declined from 19% (+/- 2) in 1991 to 14% in 1997, a significant change.
- Three times as many males (22%) as females (7%) reported binge drinking.
- The prevalence of binge drinking declined with increasing age class; from 26% of adults aged 18 to 29 to 2% for adults aged 65 and older.
- Only 8% of adults with less than a high school education reported binge drinking within the past month, while 18% of respondents with some college education reported binge drinking, a significant difference.
- There was no apparent difference in reported binge drinking between white and non-white adults in Montana.

Note: Binge drinking is defined as consuming 5 or more alcoholic drinks on one occasion in the past month.

Chronic drinking

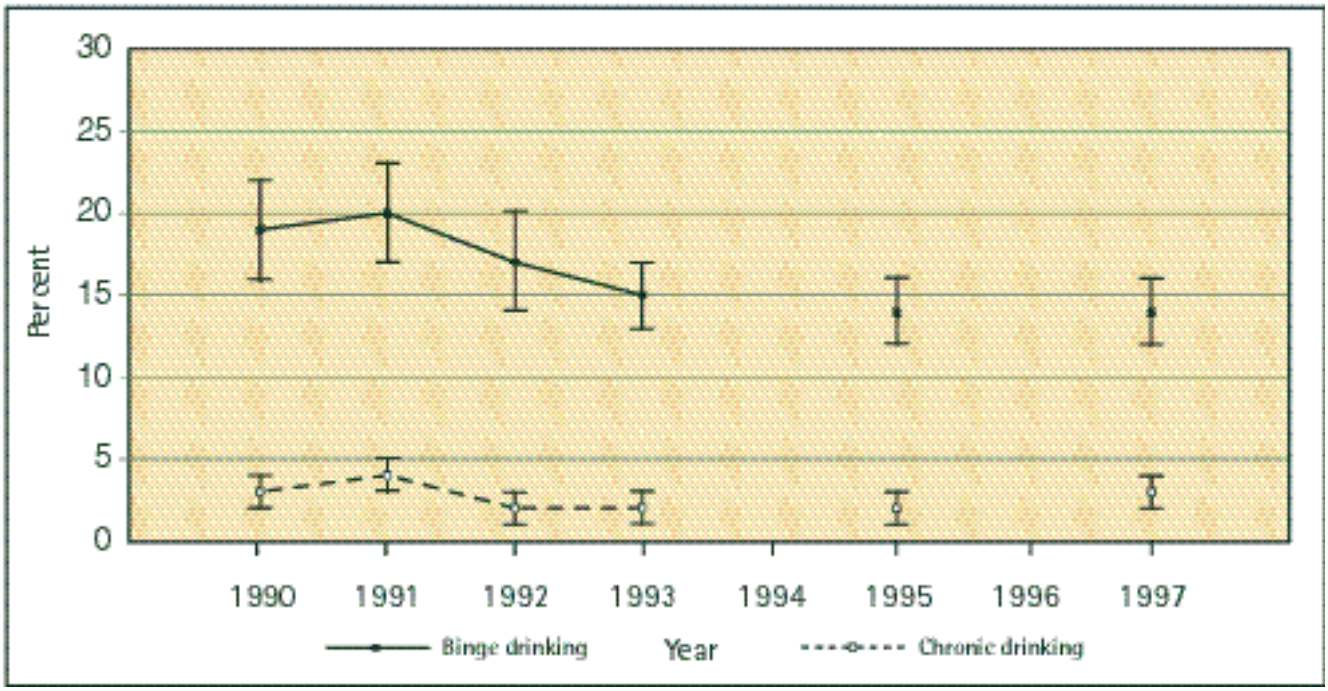
- The self-reported prevalence of chronic drinking among Montana adults in 1997 was 3%.
- Five percent of males reported chronic drinking, while less than 1% of females reported chronic drinking.
- There were no discernable differences in the prevalence of chronic drinking among age classes, education levels, income classes, or race classes.
- The prevalence of self-reported chronic drinking has remained relatively constant from 1990 to 1997.

Note: Chronic drinking is defined as consuming 60 or more alcoholic drinks in the past month.

Table 9. Alcohol Consumption, Montana Adults, 1997 (with 95% confidence intervals).

	Binge Drinking				Chronic Drinking			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults: 1997	1772	228	14	(2)	1753	40	3	(1)
Sex:								
Male	736	159	22	(3)	726	37	5	(2)
Female	1036	69	7	(2)	1027	3	0.3	(0.4)
Age:								
18 - 29	292	75	26	(5)	286	8	3	(2)
30 - 44	568	85	16	(3)	571	11	2	(1)
45 - 64	529	60	12	(3)	520	15	3	(2)
65+	381	8	2	(2)	374	6	2	(2)
Education:								
<High School	177	13	8	(4)	174	5	2	(2)
High School	558	69	13	(3)	554	12	2	(1)
Some College	539	85	18	(4)	531	10	2	(1)
College Degree	495	61	13	(3)	491	14	3	(2)
Income:								
<$10,000	95	9	11	(8)	93	2	3	(4)
$10,000 - $19,999	268	34	15	(5)	266	5	2	(2)
$20,000 - $34,999	515	85	18	(4)	509	9	2	(2)
$35,000 - $49,999	295	39	12	(4)	297	9	3	(2)
$50,000+	236	35	18	(6)	236	6	2	(2)
Race:								
White, non-Hispanic	1646	207	14	(2)	1627	37	3	(1)
Non-white or Hispanic	119	19	16	(7)	119	2	2	(3)

Figure 8. Alcohol Consumption by Montana Adults, 1990-1997.



AUTOMOBILE SAFETY

How often do you use seat belts when you drive or ride in a car?

- In 1997, 58% of Montana adults reported that they always used seat belts and 23% (+/- 2%) indicated that they nearly always wore a seat belt.
- The percentage of adults reporting that they always used seat belts increased significantly from 46% (+/- 3%) in 1991 to 55% (+/- 3%) in 1993. However there has been essentially no change since 1993.
- Significantly more females (66%) reported always using seat belts than males (49%).
- There were significant differences in the percentages of adults who always used seat belts according to age class and level of education. The percentage of adults always using seat belts increased with increasing age class (highest among adults aged 65 and older) and with increasing education level (highest among adults with a college degree).

Do you support retaining Montana's mandatory seat belt law? (State-added question)

- In 1997 and 1998, 82% (+/- 2%) and 83% (+/- 2%), respectively, of Montana adults supported retaining the mandatory seat belt law.
- Support of mandatory seat belt use in Montana has increased significantly from 59% (+/- 3%) in 1988, the first year of the law, to 83% in 1998.

Drinking and driving:

- In the 1997 survey, 3% of adults indicated that they had driven when they "had perhaps too much to drink."
- There were no discernable differences in the prevalence of reported drinking and driving among sexes, education levels, income classes, or race classes.
- No adults aged 65 and older reported drinking and driving.
- Since 1990, the prevalence of reported drinking and driving among Montana adults has remained approximately the same.

Healthy People 2000 Objective:

9.12 Increase use of safety belts. . . to at least 85% of motor vehicle occupants.

Table 10. Automobile Safety, Montana Adults, 1997 (with 95% confidence intervals).

	Always uses a seat belt				Drinking and driving			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults:								
1997	1802	732	58	(3)	1786	45	3	(0.8)
Sex:								
Male	760	380	49	(4)	748	35	4	(2)
Female	1042	352	66	(3)	1038	10	1	(1)
Age:								
18 - 29	297	149	50	(6)	294	16	5	(3)
30 - 44	578	258	54	(4)	575	18	3	(1)
45 - 64	537	201	60	(5)	531	11	2	(1)
65+	388	124	67	(5)	384	0	0	
Education:								
<High School	180	88	49	(9)	177	3	2	(2)
High School	575	256	52	(5)	568	13	2	(1)
Some College	543	215	60	(5)	542	18	4	(2)
College Degree	500	171	64	(5)	496	11	2	(1)
Income:								
<$10,000	95	46	51	(11)	95	1	1	(2)
$10,000 - $19,999	273	118	55	(7)	270	9	4	(3)
$20,000 - $34,999	520	214	56	(5)	514	14	3	(1)
$35,000 - $49,999	298	124	58	(6)	297	12	4	(2)
$50,000+	238	85	62	(7)	238	6	3	(2)
Race:								
White, non-Hispanic	1676	679	58	(3)	1660	44	3	(1)
Non-white or Hispanic	119	50	57	(11)	119	1	1	(2)

Figure 9. Montana Adults Who Always Use A Seatbelt, 1991-1997.

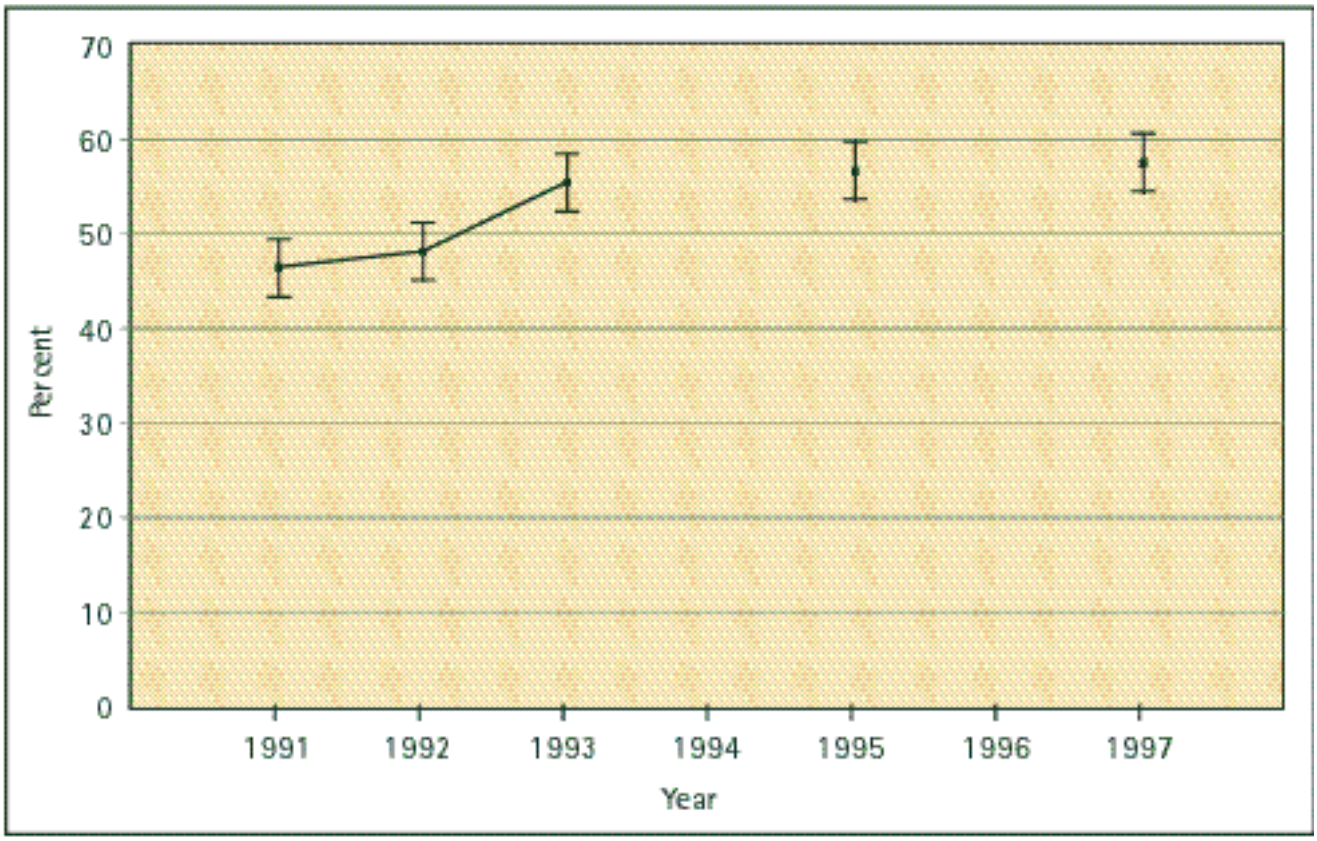
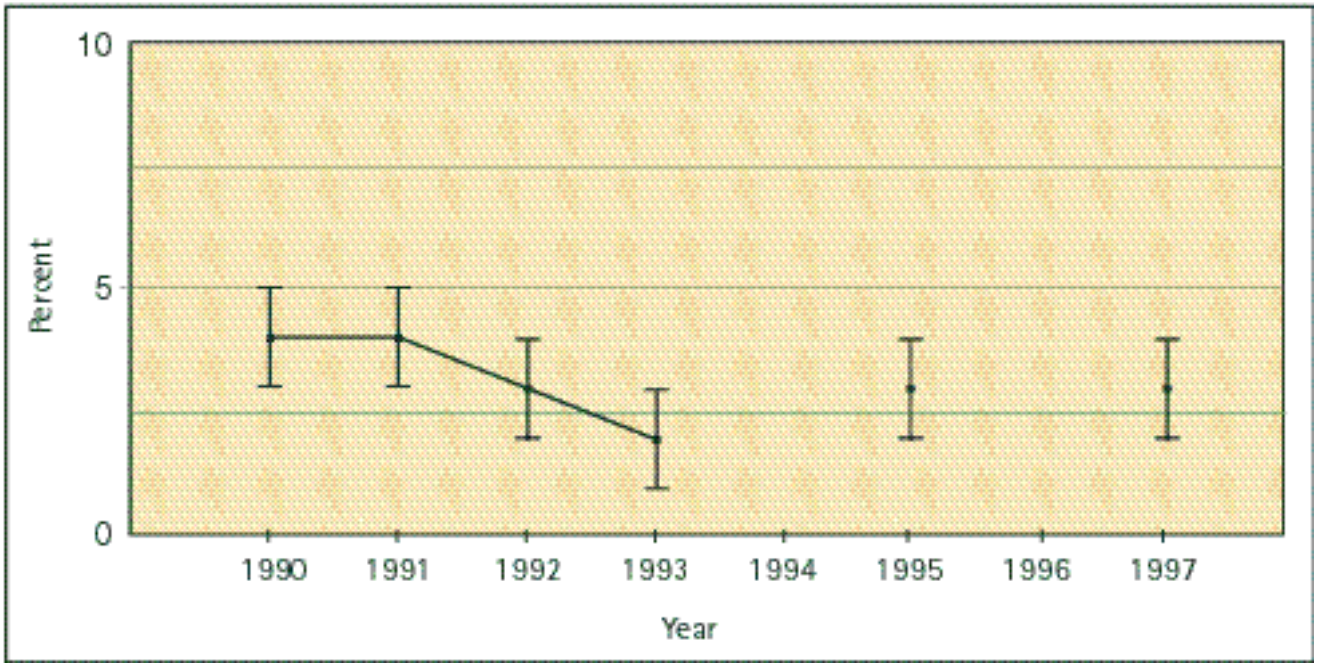


Figure 10. Drinking and Driving, Montana Adults, 1990-1997.



TOBACCO USE

Current cigarette smokers:

- Twenty percent and 21% of Montana adults in 1997 and 1998, respectively, reported that they currently smoked cigarettes. Of current smokers, 46% smoked between 1/2 and 1 pack of cigarettes per day.
- The prevalence of smoking among Montana adults has remained virtually unchanged since 1990.
- Only 12% of adults aged 65 and older were current smokers; significantly less than adults in younger age classes.
- Self-reported smoking declined with increasing education level. Significantly fewer adults with a college degree (12%) reported smoking compared to 29% of adults with less than a high school education.
- Smoking rates tended to decline as annual household income increased. Less than 18% of adults with household incomes of $35,000 and greater smoked, while over 30% of adults from households with annual earnings less than $20,000 smoked.
- Significantly more non-whites (32%) smoke cigarettes than whites (20%).

Note: A current smoker is defined as someone who has ever smoked 100 cigarettes and who now smokes every day or some days.

Quit smoking for at least one day in past year:

- Forty-nine percent and 45% of current smokers who smoked every day reported that they quit smoking for at least one day or longer in the past year during 1997 and 1998, respectively.
- Significantly more adults in the 18 to 29 year age class quit for one or more days than adults in older age classes.

Current smokeless tobacco users:

- Five percent (1997) and 7% (1998) of Montana adults reported that they currently used smokeless tobacco.
- Smokeless tobacco use among Montana adults has remained virtually unchanged since 1990.
- Smokeless tobacco use among males was 12%, while use among females was less than 1%.

Note: A current smokeless tobacco user is one who reported that they currently used either chewing tobacco, snuff, or both.

Cigar smoking:

- In 1998, 4% of Montana adults reported that they had smoked one or more cigars in the past month. Of the 72 respondents who said they smoked cigars in the past month, 37% (+/- 12%) smoked cigars on one or more days per week, while 63% (+/- 12%) smoked less than once per week. Sixteen percent (+/- 9%) smoked cigars every day.
- Like smokeless tobacco use, cigar smoking is primarily a male phenomenon, with less than 1% of females reporting that they smoked cigars.

Healthy People 2000 Objectives:

3.4 Reduce cigarette smoking to a prevalence of no more than 15% among people aged 18 and older.

3.6 Increase to at least 50% the proportion of cigarette smokers aged 18 and older who stopped smoking cigarettes for at least one day during the preceding year.

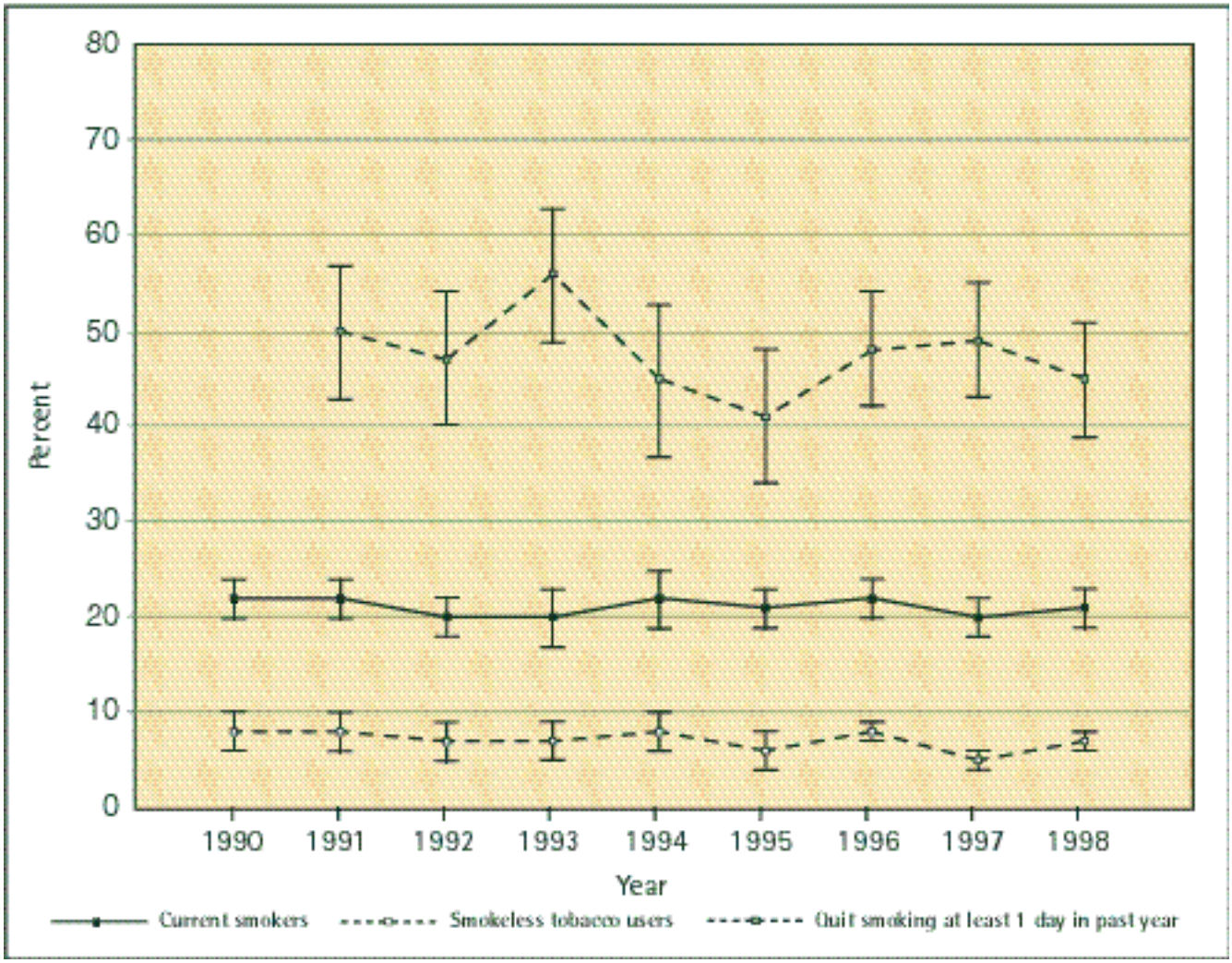
Table 11. Tobacco Use, Montana Adults, 1997 and 1998 (with 95% confidence intervals).

	Current Smoker				Quit smoking for at least 1 day*				Current Smokeless Tobacco User				Smoked 1 or more cigars in the past month			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults:																
1997	1803	389	20	(2)	342	170	49	(6)	1800	77	5	(1)				
1998	1804	398	21	(2)	347	152	45	(6)	1796	105	7	(1)	1784	72	4	(1)
Combined	3607	787	21	(1)	689	322	47	(4)	3596	182	6	(1)				
Sex:																
Male	1547	337	21	(2)	292	123	43	(6)	1540	176	12	(2)	776	68	8	(2)
Female	2060	450	21	(2)	397	199	51	(5)	2056	6	0.3	(0.3)	1008	4	0.2	(0.2)
Age:																
18 - 29	610	143	23	(4)	121	75	64	(10)	609	55	10	(3)	311	14	5	(3)
30 - 44	1126	256	22	(3)	226	103	43	(7)	1123	83	8	(2)	543	30	5	(2)
45 - 64	1089	286	25	(3)	254	108	42	(7)	1084	30	3	(1)	543	24	4	(2)
65+	777	101	12	(2)	87	36	43	(11)	775	14	2	(1)	384	4	1	(1)
Education:																
<High School	360	105	29	(5)	94	45	48	(11)	359	19	6	(3)	178	8	5	(4)
High School	1176	305	25	(3)	269	122	46	(7)	1172	68	7	(2)	592	19	3	(2)
Some College	1092	250	21	(3)	220	103	47	(7)	1089	53	6	(18)	541	23	4	(2)
College Degree	974	127	12	(2)	106	52	48	(10)	971	41	5	(1)	472	22	5	(2)
Income:																
<$10,000	175	60	32	(8)	50	24	44	(15)	175	8	6	(4)	80	2	4	(6)
$10,000 - $19,999	564	197	34	(4)	168	82	50	(8)	564	22	5	(2)	287	6	2	(2)
$20,000 - $34,999	984	211	21	(3)	186	85	46	(8)	982	64	8	(2)	461	16	3	(2)
$35,000 - $49,999	561	99	17	(3)	90	39	44	(11)	560	34	6	(2)	263	14	6	(3)
$50,000+	505	63	13	(3)	52	23	44	(15)	503	23	5	(2)	260	16	6	(3)
Race:																
White, non-Hispanic	3358	709	20	(1)	623	280	45	(4)	3348	163	6	(1)	1662	66	4	(1)
Non-white or Hispanic	238	77	32	(7)	65	42	64	(14)	237	19	10	(5)	118	6	6	(5)

* Denominator is current smokers who smoke every day

When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 11. Tobacco Use, Montana Adults, 1990-1998.



DIABETES and IMMUNIZATION

Were you ever told you have diabetes?

- Three percent and 4% of Montana adults responded “yes” in the 1997 and 1998 surveys, respectively.
- The prevalence of diabetes among Montana adults has remained approximately the same since 1990.
- The prevalence of diabetes increased with age, from less than 1% of adults aged 18 to 29 to 7% of adults aged 65 and older.
- There were no differences in the prevalence of diabetes by sex.
- Adults with less than a high school education were significantly more likely to have been told they had diabetes (7%) than adults with a college education (2%).
- The reported prevalence of diabetes declined with increasing level of annual household income, from 7% for adults with less than $10,000 in income to 1% for adults with annual incomes of $35,000 or more.
- The prevalence of reported diabetes was lower among white, non-Hispanic adults (3%) than among non-white or Hispanic adults (7%).

Have you had a flu shot in the past year (aged 65 and older)?

- Sixty-eight percent and 73% of Montanans aged 65 and older reported in 1997 and 1998, respectively, that they had a flu shot in the past year.
- Influenza immunization rates tended to increase between 1995 and 1998.
- There were no discernable differences between sexes regarding having had a flu shot in the past year.
- Adults aged 65 and older with less than a high school education seemed less likely to have had a flu shot in the past year than those with higher levels of education.

Have you ever had a pneumonia vaccination (aged 65 and older)?

- Fifty-one percent and 56% of Montana adults aged 65 and older reported that they had ever received a pneumonia vaccination in 1997 and 1998, respectively.
- Sex and age class may influence the percentage of adults aged 65 and older who ever have had a pneumonia vaccination (broad 95% confidence intervals barely overlap or nearly overlap). Females may be more likely to have ever been vaccinated than males and adults aged 75 and older may be more likely to have ever been vaccinated than adults aged 65 to 74.
- Annual household income level and education appear to have no influence on whether adults aged 65 and older had ever had a pneumonia vaccination.
- From 1995 to 1998, the percentage of Montana adults aged 65 and older who had ever had a pneumonia vaccination increased significantly from 35% to 56%.

Healthy People 2000 Objective:

17.11 Reduce diabetes. . . to a prevalence of no more than 25 per 1,000 people (i.e., 2.5%).

20.11 Increase pneumococcal pneumonia and influenza immunization among noninstitutionalized, high risk populations. . . to at least 60 percent.

Table 12. Diabetes and Immunization, Montana Adults, 1997 and 1998 (with 95% confidence intervals).

	Told have diabetes				Had a flu vaccination* in past year				Ever had a pneumonia vaccination*			
	Total no.	No.	%	CI (+/-)	Total no	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
All Adults :												
1997	1802	65	3	(1)	388	266	68	(5)	376	201	51	(6)
1998	1803	70	4	(1)	388	283	73	(5)	378	204	56	(5)
Combined	3605	135	3	(1)	776	549	71	(3)	754	405	53	(4)
Sex:												
Male	1546	56	3	(1)	297	213	71	(6)	284	135	48	(6)
Female	2059	79	3	(1)	479	336	70	(5)	470	270	57	(5)
Age:												
18 - 29	610	1	0.2	(0.4)								
30 - 44	1125	19	2	(1)								
45 - 64	1089	55	5	(1)								
65+	776	59	7	(2)								
65-74					401	279	69	(5)	395	194	49	(5)
75+					375	270	72	(5)	359	211	60	(5)
Education:												
<Highschool	359	25	7	(3)	171	114	66	(8)	163	87	52	(9)
High School	1176	47	3	(1)	294	202	70	(6)	290	152	52	(6)
Some College	1039	38	3	(1)	170	129	75	(7)	166	97	58	(8)
College Degree	974	24	2	(1)	139	104	74	(8)	134	69	54	(9)
Income:												
<$10,000	175	14	7	(4)	30				30			
$10,000 - $19,999	564	28	5	(2)	144	93	65	(9)	142	70	49	(9)
$20,000 - $34,999	984	32	3	(1)	180	135	74	(7)	174	95	54	(8)
$35,000 - $49,999	561	8	1	(1)	50	38	77	(13)	50	25	49	(15)
$50,000+	505	7	1	(1)	28				27			
Race:												
White, non-Hispanic	3356	116	3	(1)	758	537	71	(3)	738	399	54	(4)
Non-white or Hispanic	238	18	7	(3)	18				16			
					* Denominator is persons 65 years and older				* Denominator is persons 65 years and older			

When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 12. Prevalence of Diabetes Reported by Montana Adults, 1990-1998.

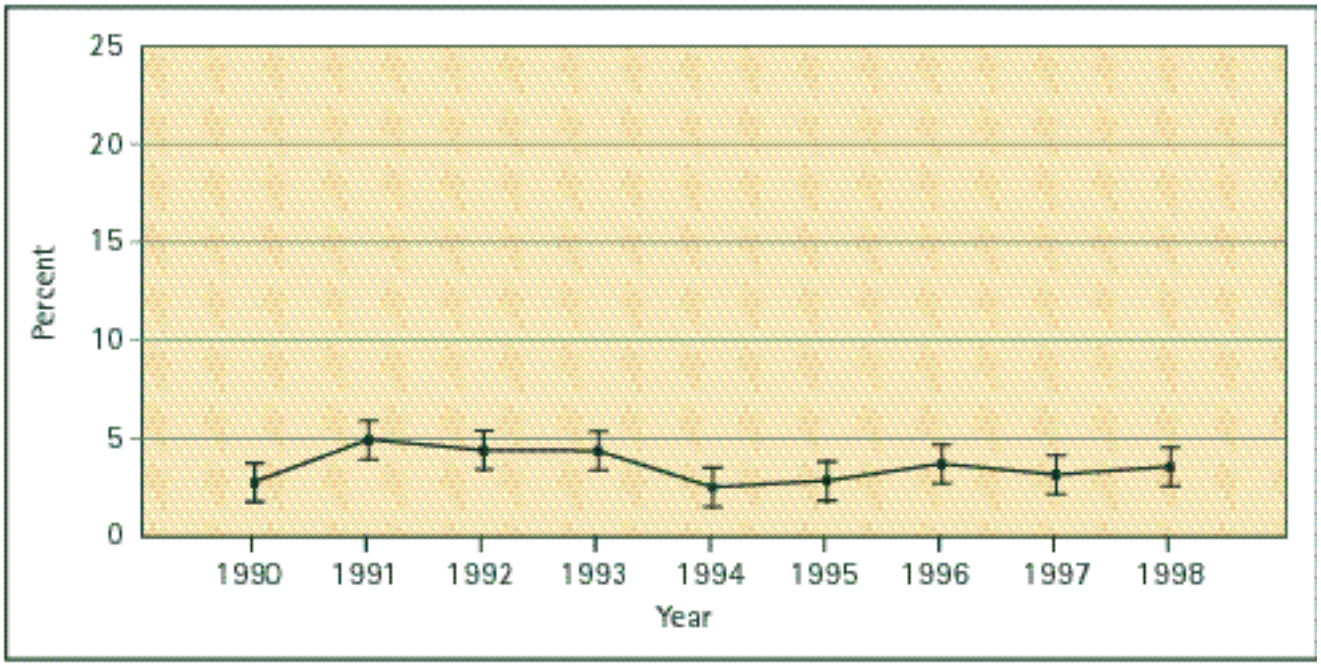
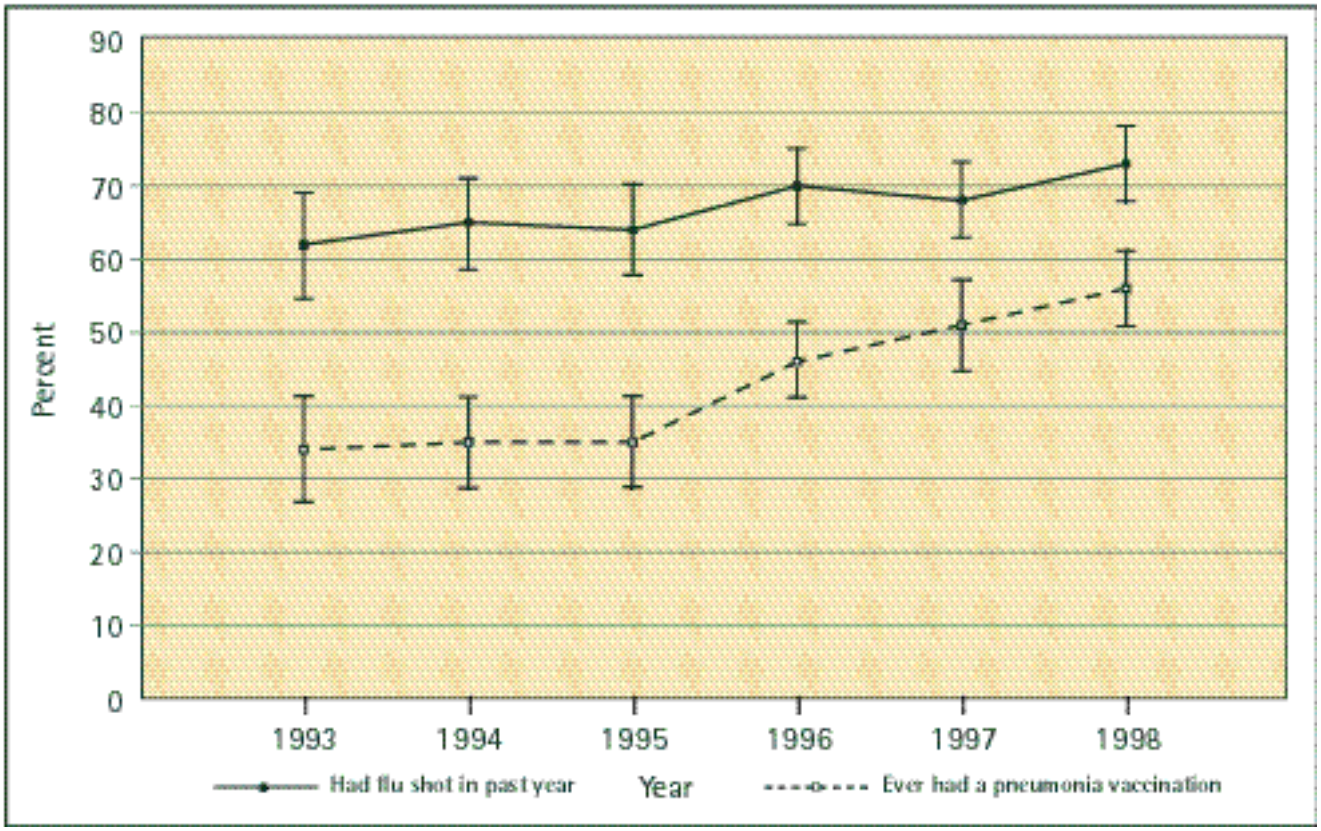


Figure 13. Flu and Pneumonia Immunization Among Montana Adults aged 65 and older, 1993-1998.



BREAST CANCER SCREENING

Age 40 and older and ever had a clinical breast exam?

- Ninety-four percent of women age 40 and older reported they had ever had a clinical breast exam in 1997 and 1998.
- Significantly more women aged 40 to 49 (97%) reported they had ever had a clinical breast exam compared with women aged 75 and older (90%) for the same time period.
- Only 86% of women 40 years and older with less than a high school education reported they had ever had a clinical breast exam compared to women with more than a high school education (≥96%).
- The percentage of women ever having a clinical breast exam was higher among those with household incomes above $35,000 compared to those women with incomes less than $20,000.

Age 40 and older and ever had a mammogram?

- Eighty-three percent and 82% of the women age 40 and older reported they had ever had a mammogram in 1997 and 1998, respectively.
- Significantly more women in age classes 50 and older (≥85%) reported ever having had a mammogram compared with women age 40 to 49 (75%).

Age 40 and older and ever had both a mammogram and clinical breast exam?

- In 1997 and 1998, 79% and 81%, respectively, of women age 40 and older reported they had ever had both a mammogram and clinical breast exam.
- Higher percentages of women age 50 to 64 (85%) and 65 to 75 (84%) reported they had ever had a mammogram and clinical breast exam than women aged 40 to 49 (74%).
- The percentages of women age 40 and older who reported they ever had both a mammogram and clinical breast exam increased with increasing education level.

Age 50 or older and had a clinical breast exam and mammogram in the past two years?

- Sixty-five percent and 68% of women age 50 and older reported they had both a clinical breast exam and mammogram in the past two years in 1997 and 1998, respectively.
- A lower percentage of women age 75 and older (59%) reported having had both examinations in the past two years compared with women 65 to 74 years of age (71%).
- Significantly lower percentages were reported for women age 50 and older with less than a high school education (56%) compared to those with a college degree (80%) and for those with household incomes below $20,000 (≤60%) compared to women with household incomes of $35,000 or more (≥80%).

Healthy People 2000 Objective:

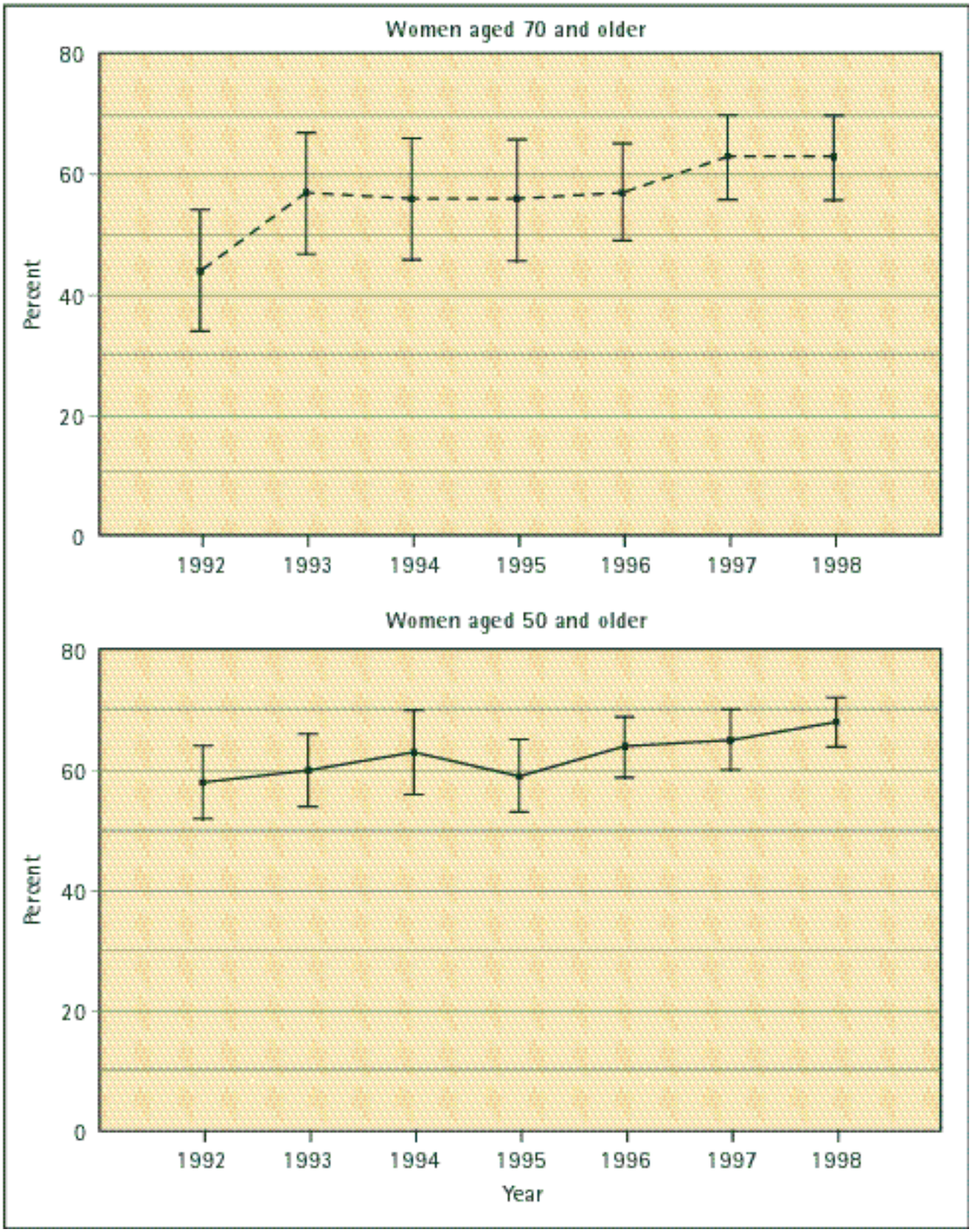
16.11 Increase to at least 80 percent the proportion of women aged 40 and older who have ever received a clinical breast examination and a mammogram, and to at least 60% those women aged 50 and older who have received them within the preceding 1-2 years.

Table 13. Breast Cancer Screening, Montana Women 40 and Older, 1997 and 1998 (with 95% confidence intervals).

	Ever had a clinical breast exam				Ever had a mammogram				Ever had both a mammogram and clinical breast exam (obj. 16.11)				Age 50+ and had both in past 2 years (obj. 16.11)			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
Females 40+																
1997	686	641	94	(2)	686	563	83	(3)	684	538	79	(3)	457	289	65	(5)
1998	645	606	94	(2)	645	531	82	(3)	637	516	81	(3)	443	292	68	(4)
Combined	1331	1247	94	(1)	1331	1094	83	(2)	1321	1054	80	(2)	900	581	67	(3)
Age:																
40-49	421	408	97	(2)	421	316	75	(4)	421	313	74	(4)	N/A			
50-64	430	403	94	(2)	430	374	87	(3)	427	362	85	(4)	427	292	69	(5)
65-74	218	205	95	(3)	218	184	86	(5)	217	178	84	(5)	217	148	71	(6)
75+	262	231	90	(4)	262	220	85	(4)	256	201	80	(5)	256	141	59	(6)
Education:																
<High School	156	131	86	(6)	156	120	77	(7)	152	108	72	(8)	134	72	56	(9)
High School	467	434	93	(3)	467	375	80	(4)	462	358	78	(4)	344	215	65	(5)
Some College	378	364	96	(2)	378	314	83	(4)	377	305	81	(4)	243	157	68	(6)
College Degree	329	317	97	(2)	329	284	87	(4)	329	282	87	(4)	178	137	80	(6)
Income:																
<$10,000	76	67	85	(10)	76	58	77	(10)	75	54	71	(11)	56	30	52	(14)
$10,000 - $19,999	214	195	91	(4)	214	178	85	(5)	214	170	81	(5)	153	88	60	(8)
$20,000 - $34,999	323	310	96	(2)	323	261	81	(4)	322	257	80	(4)	214	145	68	(7)
$35,000 - $49,999	171	169	99	(1)	171	139	81	(6)	171	138	80	(6)	82	66	81	(9)
$50,000+	157	155	98	(2)	157	136	87	(6)	157	135	86	(6)	74	57	80	(10)
Race:																
White, Non-Hispanic	1263	1185	94	(1)	1263	1040	83	(2)	1255	1004	80	(2)	867	562	67	(3)
Non-white or Hispanic	66	60	91	(7)	66	53	83	(9)	64	49	80	(10)	31			

When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 14. Percent of Montana Women (aged 50+ and 70+) Who Had Both A Clinical Breast Exam and Mammogram In The Past Two Years, 1992-1998.



CERVICAL CANCER SCREENING

Have you ever had a Pap test?

- Ninety-six percent of Montana adult women reportd in 1997 and 1998 that they had ever had a Pap test.
- The percentage of women who ever had a Pap test has remained approximately unchanged from 1992 through 1998.
- Women aged 18 to 29 had a lower percentage (91%) than women aged 34 to 44 (99%) or aged 45 to 64 (98%).
- Fewer women with less than a high school education (84%) had ever had a Pap test compared with women at higher levels of education (≥96%)

Have you had a Pap test in the past three years?

- In 1997 and 1998, the percentages of women who reported they had a Pap test within the past three years were 84% and 80%, respectively.
- The percentages of women having had a Pap test in the past three years have remained relatively constant from 1992 through 1998, for all adult women and for women aged 70 and older.
- Significantly fewer women aged 65 and older (67%) reported having had a Pap test in the preceding three years compared with women in younger age classes (≥81%).
- Significant differences were evident according to education and income classes. Women with some college or a college degree had higher percentages (≥87%) than those with a high school education or less (≤76%). Percentages were higher for women in the higher household income classes ($35,000 or more) (≥90%) compared to those women with in household income below $20,000 (78%).

Healthy People 2000 Objective:

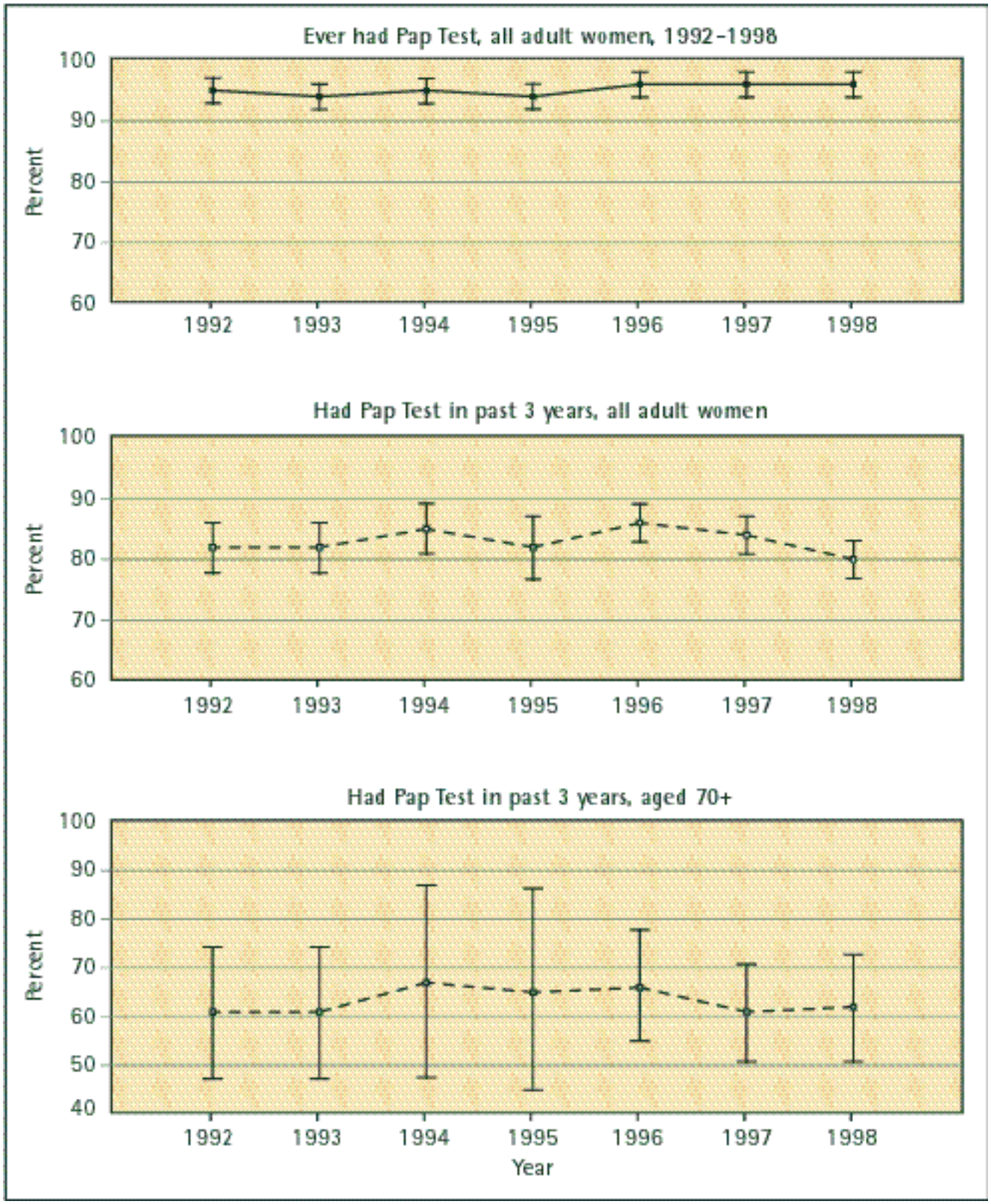
16.12 Increase to 95 percent the proportion of women aged 18 and older who have ever received a Pap test, and to at least 85 percent those who received a Pap test within the preceding 1 to 3 years.

Table 14. Cervical Cancer Screening, Montana Adult Women, 1997 and 1998 (with 95% confidence intervals).

	Ever Had a Pap Test*				Had Pap test in past 3 years*			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
Adult Females:								
1997	778	758	96	(2)	778	649	84	(3)
1998	771	743	96	(2)	767	617	80	(3)
Combined	1549	1501	96	(1)	1545	1266	82	(2)
Age:								
18 - 29	323	303	91	(5)	323	294	87	(6)
30 - 44	542	537	99	(1)	541	460	85	(3)
45 - 64	415	407	98	(1)	415	338	81	(4)
65+	268	253	95	(3)	265	173	67	(6)
Education:								
<High School	105	95	84	(13)	104	65	58	(13)
High School	494	474	96	(2)	493	378	76	(4)
Some College	509	499	98	(1)	507	438	87	(3)
College Degree	441	433	98	(1)	441	385	88	(3)
Income:								
<$10,000	91	86	94	(6)	90	70	78	(10)
$10,000 - $19,999	272	264	97	(2)	272	208	78	(5)
$20,000 - $34,999	424	420	99	(1)	424	361	84	(4)
$35,000 - $49,999	235	232	99	(1)	235	212	90	(4)
$50,000+	204	202	99	(1)	204	186	92	(4)
Race:								
White, non-Hispanic	1429	1386	97	(1)	1426	1165	82	(2)
Non-white or Hispanic	117	112	89	(12)	116	100	78	(13)
	* Denominator is all adult women with an intact uterine cervix.				* Denominator is all adult women with an intact uterine cervix.			

When data from 1997 and 1998 were available, 2 years of data were combined for subpopulation estimates.

Figure 15. Percent of Adult Montana Women (with intact cervix) Having Pap Tests, 1992-1998.



COLORECTAL CANCER SCREENING

Age 50 and older and ever had a sigmoid or proctoscopic exam:

- In 1997, 40% of Montana adults aged 50 and older reported that they had ever had a sigmoidoscopic or proctoscopic exam.
- Significantly more adults aged 65 to 74 reported that they had ever had a sigmoidoscopic or proctoscopic exam compared to adults aged 50 to 64.
- Small sample size and broad confidence intervals obscure differences in percentages among subpopulations.

Age 50 and older and had a home blood stool test in the past two years:

- In 1997, 24% of Montana adults aged 50 and older reported that they had had a home blood stool test within the past two years.
- Small sample size and broad confidence intervals obscure differences in percentages among subpopulations.

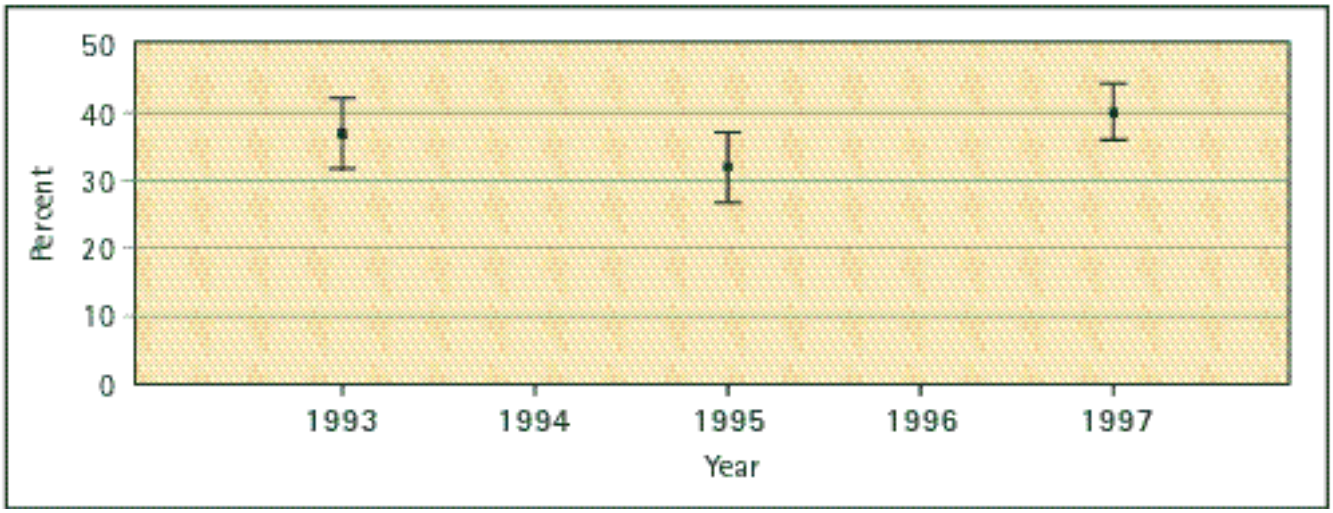
Healthy People 2000 Objective:

16.13 Increase to at least 50 percent the proportion of people aged 50 and older who have received fecal occult blood testing within the preceding 1-2 years, and to at least 40 percent those who have ever received proctosigmoidoscopy.

Table 15. Colorectal Cancer Screening, Montana Adults 50 and older, 1997 (with 95% confidence intervals).

	Ever had a proctoscopic exam				Had a home blood stool test in past 2 years			
	Total No.	No.	%	CI (+/-)	Total No.	No.	%	CI (+/-)
Adults 50+ 1997	738	297	40	(4)	730	171	24	(3)
Sex:								
Male 50+	287	113	38	(6)	288	55	20	(5)
Female 50+	451	184	41	(5)	442	116	28	(5)
Age:								
50 - 64	364	125	33	(5)	359	87	25	(5)
65 - 74	200	96	48	(7)	200	44	22	(6)
75+	174	76	45	(8)	171	40	24	(7)
Education:								
<High School	114	43	36	(9)	113	25	20	(8)
High School	269	93	34	(6)	264	52	20	(5)
Some College	176	83	46	(8)	177	45	24	(7)
College Degree	177	78	44	(8)	174	49	32	(8)
Income:								
<$10,000"	39				39			
$10,000 - $19,999	109	45	38	(9)	107	16	17	(8)
$20,000 - $34,999	193	76	40	(7)	192	48	26	(7)
$35,000 - $49,999	101	50	48	(10)	99	32	32	(10)
$50,000+	66	25	39	(12)	64	13	23	(11)
Race:								
White, non-Hispanic	707	228	40	(4)	698	163	24	(4)
Non-white or Hispanic	28				29			

Figure 16. Montana Adults Aged 50 and Older Who Ever Had A Proctosigmoidoscopy, 1993-1997.



APPENDIX A

Year 2000 Health Objectives for the Nation: Montana Summary of BRFSS Data for 1997 and 1998

Healthy People 2000[2] Objective[3]	Yr 2000 Target	Montana 1997 (CI)*	Montana 1998 (CI)*
Overweight (Objective 1.2)			
Ages ≥20	≤20%	28% (±2)	30% (±2)
Regular and Sustained Physical Activity (Objective 1.3)			
Ages ≥18	≥30%		22% (±2)
Regular and Vigorous Physical Activity (Objective 1.4)			
Ages ≥18	≥20%		13% (±2)
No Leisure-time Physical Activity (Objective 1.5)			
Ages ≥18	≤15%		25% (±2)
Ages ≥65	≤22%		38% (±4)
Cigarette Smoking (Objective 3.4)			
Ages ≥18	≤15%	20% (±2)	21% (±2)
Safety Belt Use (Objective 9.12)			
Ages ≥18	≥85%	58% (±3)	
Blood Pressure Screening (within past two years) (Objective 15.13)			
Ages ≥18	≥90%	92% (±1)	
Cholesterol Screening (within past five years) (Objective 15.14)			
Ages ≥18	≥75%	63% (±3)	

* 95% confidence interval (±%)

Healthy People 2000[2] Objective[3]	Yr 2000 Target	Montana 1997 (CI)*	Montana 1998 (CI)*
Fruit and Vegetable Consumption (five or more servings per day) (Objective 16.8)			
Ages ≥18	not specified		24% (±2)
Clinical Breast Exam and Mammogram (within past two years) (Objective 16.11)			
Women ages ≥50	≥60%	65% (±5)	68% (±4)
Women ages ≥70	≥60%	63% (±7)	65% (±7)
Clinical Breast Exam and Mammogram (ever had) (Objective 16.11)			
Women ages ≥40	≥80%	79% (±3)	81% (±3)
Women ages ≥70	≥80%	78% (±6)	86% (±5)
Pap Smear, Women with Intact Uterine Cervix (ever had) (Objective 16.12)			
Ages ≥18	≥95%	96% (±2)	96% (±2)
Ages ≥70	≥95%	94% (±5)	94% (±4)
Pap Smear, Women with Intact Uterine Cervix (within past three years) (Objective 16.12)			
Ages ≥18	≥85%	84% (±3)	80% (±3)
Ages ≥70	≥70%	61% (±9)	62% (±11)
Proctoscopy (ever had) (Objective 16.13)			
Ages ≥50	≥40%	40% (±4)	
Influenza Immunization (within past year) (Objective 20.11)			
Ages ≥65	≥60%	66% (±5)	73% (±5)
Pneumococcal Pneumonia Immunization (ever had) (Objective 20.11)			
Ages ≥65	≥60%	51% (±6)	56% (±5)

* 95% confidence interval (±%)

[1] Behavioral Risk Factor Surveillance System

[2] Public Health Service. Healthy People 2000: National Health Promotion and Disease Prevention Objectives—full report with commentary. Washington, DC: U.S. Department of Health and Human Services, 1991.

[3] In some cases, BRFSS definitions of objectives differ slightly from those in Healthy People 2000. See Healthy People 2000 for the exact definition of the objective.

APPENDIX B

Contact Information

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http://www.cdc.gov.nccdphp/brfss

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Montana Behavioral Risk Factor Surveillance System

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